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WORKING PAPER NO. 35

Restrictive Effects of Rate Ceilings on Consumer Choice: The Massachusetts Experience

Krannert Graduate School of Management – Purdue University

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RESTRICTIVE EFFECTS OF RATE CEILINGS ON CONSUMER CHOICE:

THE MASSACHUSETTS EXPERIENCE

Robert W. Johnson and A. Charlene Sullivan*

Abstract

Beginning in January 1977, Massachusetts provided a convenient laboratory to examine the effects upon consumer finance companies and their customers of low rate ceilings. At that time the Small Loans Regulatory Board reduced rates significantly, especially on loans of less than $2,200 to $2,500 (depending upon maturity). On these loans rates permitted licensed lenders in Massachusetts were below those of almost all other states. Using studies of the cost functions of consumer finance companies, we hypothesized that the reduced rates would have three main effects:

(1) Small loans would become relatively less available than large loans.

(2) Small finance companies would be more adversely affected than large ones.

(3) High-risk customers needing small loans would be more adversely affected than low-risk consumers requiring large loans. Further, we anticipated that some identifiable portion of consumers unable to obtain credit at finance companies would be unlikely to be accommodated at commercial banks.

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The empirical evidence from Massachusetts supports the first two hypotheses. Between years-end 1975 and 1979, the number of loans made below $500 declined by 32 percent, and the large, national finance companies dramatically increased their investment in large second mortgage loans. At the same time the industry structure changed. The number of loan offices fell by 35 percent, with the small, local companies bearing most of the brunt of the decline in loans made and loans outstanding.

The experience in Massachusetts appears to refute the reasons commonly advanced for imposing restrictive rate ceilings on consumer credit. While some of the potential borrowers may have been better off without credit, others rationed out of the market would have managed their debts satisfactorily. Survey evidence suggests that the latter group considerably outnumbers the former. Moreover, consumers denied cash credit may merely turn to retail creditors, who can provide credit to high-risk purchasers by inflating their cash prices. Instead of assuring that consumers would pay a "fair" price for credit, the lowered rate ceilings had the effect of restricting credit by eliminating firms and offices from the market. By curtailing supply, the rate order decreased the likelihood that consumers would pay a fair price. Finally, the assertion that small companies deserved to be expunged from the market because they were inefficient is not warranted. Evidence shows that small firms do not realize economies of scale. Rate ceilings that do not accommodate their cost structures will ultimately leave only large firms in the market, with resulting anti-competitive effects for consumers.

The remaining issue is whether consumers who were unable to obtain credit from finance companies could turn to other sources for loans, particularly commercial banks. By analyzing data from a national survey of consumers, we were able to identify two distinct classes of customers: those who borrowed only from banks and those who borrowed only from finance companies. When measures of credit risk were analyzed for these two groups, borrowers from finance companies appeared to be significantly more risky than those borrowing from commercial banks, although there was evident overlap in their credit scores. Finance company customers with low credit scores seemed unlikely to be able to obtain loans from commercial banks, if finance company credit were curtailed by low rate ceilings. In comparison to bank borrowers, finance company customers who would be excluded from the legal cash loan market were more likely to be black; to rent rather than own their residence; to have lower incomes, lower total assets, and less education. They were more likely to be concerned about the size of their monthly payments and less likely to view the annual percentage rate as an important term in their credit agreements.

Some would argue that these consumers should be "protected out" of the cash loan market for their own interests. Nonetheless, they are people who have, in their judgment, a need for credit. In our value system, we find it repugnant to restrict their freedom of choice among credit sources by imposing prohibitive rate ceilings.

RESTRICTIVE EFFECTS OF RATE CEILINGS ON CONSUMER CHOICE: THE MASSACHUSETTS EXPERIENCE

Robert W. Johnson and A. Charlene Sullivan

The purpose of this paper is to analyze the effects upon consumers of the existing rate ceiling on regulated small loans in the Commonwealth of Massachusetts. Considerable attention has been given to the effects of the rate ceilings upon consumer finance companies. But whatever effects rate ceilings may have upon the lenders of Massachusetts, those effects are ultimately transferred to the citizens of the Commonwealth.

Following a brief review of rate ceilings on regulated loans in Massachusetts and the reasons advanced for rate regulation, the main body of our discussion is divided into two parts. The first part will examine the effects of rate ceilings on availability of credit to consumers, especially a ceiling that is as much below rates for comparable loans in other states as that in Massachusetts. We will see how the level and structure of the rate ceiling has affected the amounts and sizes of loans available to customers of Massachusetts consumer finance companies from the end of 1975 to the end of 1979.

But we would also like to know what kinds of consumers are affected by these rate ceilings. If finance companies leave the market, are their customers likely to find their credit demands satisfied by other Massachusetts lenders? Because of membership requirements of credit unions, we focus on the probability that finance company customers could be served by commercial banks. Analysis of data collected in a national survey of consumers shows the type of consumer typically served by finance companies in the United States. Evidence indicates that a portion of these borrowers could not obtain credit from commercial banks. To deny them access to credit from finance companies may be to deny them cash credit from legal lenders.

Background

Effective January 2, 1977, the Small Loans Regulatory Board of the Commonwealth of Massachusetts fixed the maximum rate of charge on loans of $3,000 or less at 18 percent, plus an initial administration fee of $15, not to be charged more than once in a 12-month period upon renewal or refinancing. The administration fee has the greatest impact on the annual percentage rate (APR) on small, short-term loans. At year-end 1979, there were 12 states with APRs lower than those permitted in Massachusetts on $500, 6-month loans. However, these loans are atypical. On more typical $1,000, 12-month loans, there were only two states--Wisconsin and Texas--with APRs below the 20.62 percent rate permitted in Massachusetts. (The small loan rate in California was lower, but not the rate permitted personal property brokers.) No state in 1979 had a lower APR on $1,000, 24-month, or 36-month loans. These comparisons exclude Arkansas and the District of Columbia, which have no consumer finance companies.

The new regulation significantly reduced APRs permitted in Massachusetts, as illustrated in the table shown below, taken from [8] for 1976 and 1980:

Maturity (mos.)	Size	Permitted APR 1976	Permitted APR 1979
12	$500	27.58	23.21
12	$750	25.37	21.48
12	$1,000	25.39	20.62
12	$2,000	20.08	19.31
24	$2,000	20.00	18.64
24	$3,000	16.94	18.43
36	$3,000	16.79	18.27

The purpose of the remaining analysis is to measure and evaluate the effects on customers of Massachusetts consumer finance companies of this change in the permitted rate structure on loans of $3,000 or less. In this analysis it is relevant to note that lenders in Massachusetts may charge 18 percent per annum on second mortgage loans exceeding $1,500.

Reasons Given for Rate Ceilings

The United States is unique among the industrial nations of the world in the panoply of rate ceilings that are applied to consumer credit. Whereas price ceilings have been scrupulously avoided on most consumer goods and services (except those furnished by public utilities), it is a common practice among the states to limit the prices that may be charged for the use of consumer credit. The reasons advanced for such regulation typically center on a need to prevent consumers from becoming "overburdened" with debt, to assure that consumers pay a "fair" price for credit, and (in the case of Massachusetts) to treat lenders as quasi-public utilities. Let us summarize briefly each of these justifications for rate ceilings so that they can be tested against the experience with reduced rate ceilings in Massachusetts.

To Avoid Overburdening Consumers with Debts

With respect to consumer credit, a "fundamental proposition of economic theory is that under perfect competition and monopolistic competition, a ceiling on price will inevitably lead to supply curtailments and rejections of demand if the ceiling is pressed low enough" [12, p.1365]. The rejections of demand that result from low rate ceilings is regarded by some as a benefit to society. Thus, the argument made by Wallace for low rate ceilings is based upon the assertion that, by being denied credit, the debtor family is protected "from a threat to stability and psychic harm" [16, p.475]. A "large group of high risk debtors" need to be protected in this manner because they "fail to comprehend their own degree of risk." A second class of debtors needs to be denied credit because they are "simply not competent to run their own affairs" [15, p.476]. In Wallace's judgment the gains to these two groups more than offset the losses to a third group of consumers, who could have managed their debts, but who are denied access to credit as a result of the supply curtailments produced by low rate ceilings.

To Assure that Consumers Pay a "Fair" Price for Credit

While there is no generally acceptable standard for determining whether consumers are paying "fair" rates, the concept of equitable rates generally relates to whether the price of credit is reasonable in relation to the cost of supplying it. Concerns that consumers may pay "too high" a price for credit usually stem from the belief that creditors have excessive market power in relation to consumers. It is argued that in such cases creditors will charge the ceiling rate.[1] For example, Fritz asserts that in "most fields of consumer credit, with the exception of new car financing, creditors charge the maximum allowable rate, or close to it" [11, p.512]. From this line of argument it follows that to curb the abuse of excessive market power, rate ceilings are necessary, presumably ceilings lower than would otherwise be set by the market.

To Administer Credit Grantors As Public Utilities

Massachusetts is fairly unique among the states in applying a quasi-public utility approach to setting rates that may be charged by lenders. The Small Loans Regulatory Board is charged by Massachusetts statute to determine rates on loans of $3,000 or less ("regulated loans") that will provide enough capital to "make available adequate credit facilities to individuals seeking such loans at reasonable rates."[2] The terms "adequate" and "reasonable" are undefined. The intervenors in the 1976 rate hearings in Massachusetts argued that the "Board's duty is not to support the industry; rather it is to serve the public by satisfying a need. If the need is satisfied elsewhere or is slaked, there is no obligation to raise rates and attempt to maintain the industry" [6, p.3].

The intervenors further argued that the unprofitability of finance companies could be attributed, not to low rate ceilings, but to lack of growth opportunities in Massachusetts and inefficient management. Since finance companies had no prospects for growth, "the return to small loan companies need be only sufficient to retain present capital, [whereas] utilities must have sufficient return to attract substantial equity capital willing to invest in expensive and risky assets" [6, p.12].

Effects on Consumers of Lowered Rate Ceilings

Except for rare six-month loans, the Small Loans Regulatory Board lowered the rate ceiling on regulated small loans of less than $2,200 (12-month) to $2,400 (36-month). We expect that this change affected the consumer finance companies in Massachusetts and their customers. The purpose of this section is, first, to develop hypotheses concerning the probable effects of the lowered rate ceilings and, second, to test those hypotheses using empirical data from Massachusetts. At the conclusion we shall use the experience in Massachusetts to examine the validity of the reasons advanced for the imposition of rate ceilings on consumer loans.

The Credit Offer Function

At the outset, we should recognize that the rate of charge is only one feature of a loan and that it may not be the feature of greatest interest to many consumers. Other aspects of the loan are the maturity, the security required, the flexibility of payments, the convenience of the lender's office, collection procedures, the willingness of the creditor to extend payments or renegotiate a loan contract, delinquency charges, and so on. For example, in a national survey of consumers in mid-1977 by the Survey Research Center of the University of Michigan, consumers were asked to list the three credit terms they viewed as most important in purchasing an automobile [9, p.21]. "Size of payment" was mentioned most frequently, with the dollar amount of the finance charge and the annual percentage rate falling into second and third place. Asked why they chose a particular type of creditor, about one-third of the consumers gave low interest rate or low finance charges as a reason.

Asked why they chose a particular creditor from within a class, more than half of the respondents (53.6 percent) mentioned familiarity or previous good experience [9, p.21].

The terms of a credit contract are intimately related. Thus, a creditor who is permitted to charge only a very low rate of interest may be forced to shorten maturities (thereby raising monthly payments) or to close offices (thereby providing less convenient service to consumers). Because of the interaction of credit terms, what a consumer may appear to "gain" from a required change in one term, may be lost as a result of a reactive change in another term.

The Cost Function

To develop hypotheses concerning the likely effects of the lowered rate ceilings in Massachusetts, we need to understand the structure of the costs of providing credit. Two questions are addressed. First, how do costs vary according to the size of loan? Second, how do costs vary according to size of firm or size of office?

Costs in relation to size of loan. The consumer finance industry is characterized by relatively high fixed costs; that is, it costs about as much to acquire and terminate a $3,000 loan as a $300 loan. It costs about the same to record a $250 payment as a $25 payment. The chief variable cost is the cost of funds, which varies directly with the size and maturity of loan. In his extensive analysis of the costs to consumer finance companies of extending consumer credit, Benston [3, p.150] concluded that "there is no meaningful relationship between size of loan and costs, particularly for loans of less than $1,000."

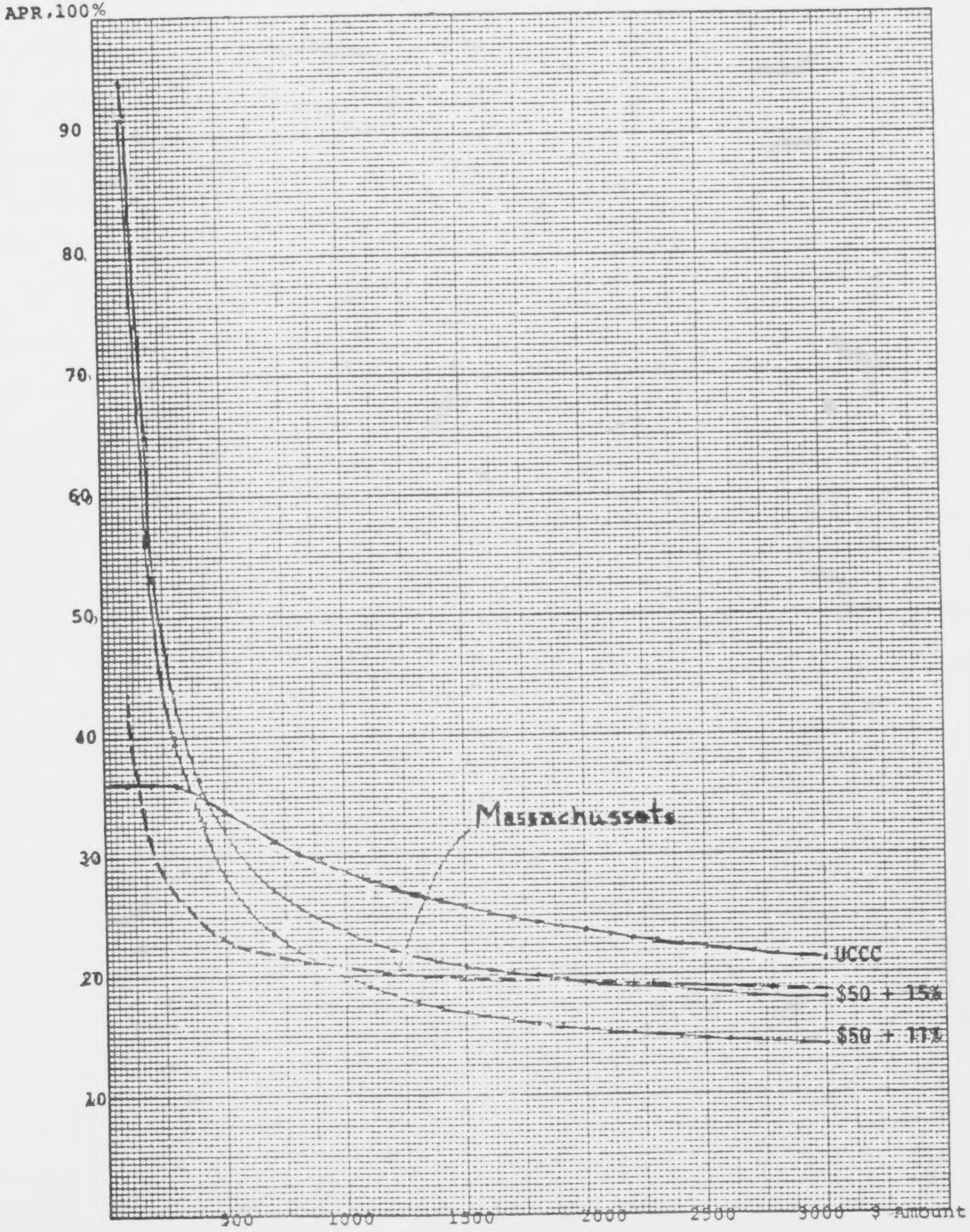
Because costs do not vary with the size of loan, total costs are higher, relative to amounts financed, for small loans than for large loans. Thus, if rate ceilings are to parallel costs of providing credit, they will slope upward as the size of loan decreases. In his analysis Benston [3, p.154] concluded that to cover operating costs, credit losses, and costs of capital "the ceiling rate would have to be 86 percent on the first $100, and 13 percent on amounts over $100. Actually, it would be far better to state the rates in two parts: $73 to service a loan for a year plus 13 percent per dollar loaned."

The staff of the National Commission on Consumer Finance (NCCF) [13, p.141] estimated in 1972 the actual costs of loans of $3,000 and less, given costs of funds of 11 percent and 15 percent as shown in Exhibit 1. Since the prime rate charged by banks in the latter part of 1972, when the costs of funds were calculated, was 5 3/4 percent, the 15 percent rate shown in Exhibit 1 would be a minimum cost of funds today. From the exhibit it can be seen that even minimum lending costs exceed the rates of return allowed Massachusetts finance companies on loans of less than $2,100.

Economies of scale. Benston also studied economies of scale in the consumer finance industry. While he found that large companies were more profitable than small ones, he attributed these results primarily to the small size of office operating by the smaller firms [3, pp.58ff. and pp.92ff.]. Thus, "a doubling of size is associated with a 13 to 17 percent increase in net income per $100 of assets and a 15 to 22 percent increase in net income per $100 of equity" [3, p.151].

Exhibit 1

APR's Required to Recover Total Estimated Costs by Size of Loan Compared to UCCC Proposed Rate Ceiling Structure.



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Notes to Exhibit 1

The line marked "UCCC" represents the maximum rates permitted in the Uniform Consumer Credit Code (1974). At that time a rate of 36 percent per annum applied to unpaid balances of $300 or less; 21 percent per annum to that part of the unpaid balances exceeding $300 x to $1,000; and 15 percent on that part of the unpaid balance over $1,000. Under section 1.106 of the UCCC the dollar amounts at which the rates change are adjusted upward to reflect changes in the Consumer Price Index. Thus, in several states that have adopted the UCCC the maximum rates are higher than shown in the chart. In no case, however, may the maximum rate exceed 36 percent per annum.

Source: National Commission on Consumer Finance, Consumer Credit in the United States. Washington, D.C.: U.S. Government Printing Office, 1972, p.144.

Hypotheses

Given the credit offer functions and the cost functions characteristic of consumer finance companies, we expect the change in rate ceilings in Massachusetts in 1977 to have had the following effects:

(1) As indicated in the initial background section, rates on loans above $2,200 - $2,500 were increased slightly, while rates on smaller loans were reduced. In essence, the slope of the rate structure was made less "steep" after 1976. Consequently, we would expect small loans to have become relatively less available than large loans.

(2) Because small companies operate small offices, which do not realize economies of scale, we would expect small consumer finance companies to have been more adversely affected by the reduction in rate ceilings than large firms.

(3) It follows from the above that we would expect consumers needing small loans, particularly from small finance companies, to have been more adversely affected by the change than consumers wishing to borrow large amounts from large finance companies, who characteristically have large offices. At a later point in this analysis we shall seek to determine whether these consumers might be expected to obtain loans from commercial banks if their access to loans from consumer finance companies is reduced.

Empirical Evidence

Between years-end 1975 and 1979, the outstanding gross amount of regulated loans ($3,000 or less) in Massachusetts fell by 12.5 percent, from $219.5 million to $192.0 million [1]. Since the consumer price index increased by 38 percent over this same period of time, outstanding regulated loans actually decreased by 37 percent in terms of real dollars. To undertake a more detailed study of the differential effects of the low rate ceiling, we obtained a sample of the individual reports of 20 of the 27 finance companies operating in 1979 and compared their loans outstanding for 1975 and 1979. These firms had about 95 percent of the total outstanding regulated loans held by licensed lenders at year-end 1979. They were somewhat more successful than the total population of finance companies, since their outstandings in regulated loans rose by three percent.

Effect on size of loans made. The expected effect of the reduced rate ceiling on the size of loan made by finance companies in Massachusetts is amply documented by a comparison of the 1975 and 1979 annual reports of the 20 finance companies surveyed. Since data relate to the number of regulated loans made, rather than outstanding, they reveal current lending practices. In contrast, outstandings reflect past as well as current practices.

Between 1975 and 1979, the number of regulated loans made rose by only one percent (Exhibit 2). However, the numbers and amounts of loans made below $500 decreased, in part because these loans had become uneconomical to make and in part because inflation had increased the dollar amount of loans sought by consumers. With the concentration on larger loans, the total amount of loans extended rose, but not by much--only by five percent. Over the four-year period the number of loans made between $1,000 and $3,000 rose from 49.5 percent of the total to 53.6 percent of the total number made.

EXHIBIT 2

THE SHIFT FROM SMALL TO LARGE LOANS IN THE REGULATED LOAN BUSINESS: LOANS MADE DURING 1975 AND 1979

	A. Numbers of Loans		
Size of loan ($)	1975	1979	Change (%)
Less than 100	635	377	-41
100.01-200	3,593	1,267	-65
200.01-300	7,197	3,705	-49
300.01-400	6,905	6,991	1
400.01-500	6,215	4,438	-29
500.01-600	8,685	10,823	25
600.01-1,000	17,212	19,223	12
1,000.01-1,500	16,146	18,740	16
1,500.01-3,000	33,372	35,392	6
Totals	99,960	100,956	1
	B. Amounts of Loans (-000)		
Less than 100	$ 50	$ 33	-34
100.01-200	524	200	-62
200.01-300	1,709	908	-47
300.01-400	2,319	2,322	*
400.01-500	2,740	1,977	-28
500.01-600	4,677	5,816	24
600.01-1,000	13,228	15,069	14
1,000.01-1,500	19,332	22,438	16
1,500.01-3,000	76,723	78,644	3
Totals	$121,302	$127,407	5

*Less than one-half of one percent

The shift from small to large loans was especially pronounced among small, local finance companies. The number of regulated loans that they made fell by 19 percent from 1975 to 1979 (Exhibit 3). The decrease in numbers of loans made was much greater for small loans than for large loans. Indeed, the only category in which the number of loans made increased over the four-year period was for loans ranging above $1,500 up to $3,000. Obviously, less prosperous consumers who needed--and could afford--only small loans were progressively excised from this portion of the legal cash loan market during this period of time.

Effect on industry structure. From years-end 1975 to 1979, the number of small loan licenses in Massachusetts fell from 266 to 172. (One license is required for each office.) As expected, small, local companies were more adversely affected by the low rate ceiling than the national chains of consumer finance companies. The gross receivables in the regulated loan business of the ten small firms surveyed contracted by 18 percent, while their outstanding receivables in the "other finance business" rose only two percent. On balance, their outstandings shrunk by five percent (Exhibit 4). In sharp contrast, the national chains increased their outstandings in the regulated loan business only slightly, while doubling their loans in the "other finance business," mainly second mortgages. In total, their outstandings rose by 40 percent.

The adverse effect of the lowered rate ceiling is also reflected in the numbers of customers served. There was essentially no change in the number of consumers served by the 20 companies providing data for 1975 and 1979. The number of consumers with small loans outstanding at the ten local finance companies fell by 23 percent, while the ten large

EXHIBIT 3

THE SHIFT FROM SMALL TO LARGE LOANS BY SMALL, LOCAL COMPANIES,*

NUMBERS OF LOANS MADE, 1975 AND 1979

Size of loan ($)	1975	1979	Change (%)
Less than 100	14	6	-57
100.01-200	192	71	-63
200.01-300	296	139	-53
300.01-400	292	191	-35
400.01-500	233	183	-21
500.01-600	341	279	-18
600.01-1,000	712	551	-23
1,000.01-1,500	562	534	-5
1,500.01-3,000	533	609	14
Totals	3,175	2,563	-19

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*Total receivables less than $3 million, year-end 1979.

EXHIBIT 4

THE SHIFT OUT OF THE REGULATED LOAN BUSINESS OF $3,000 OR LESS, 1975-1979

(Dollar amounts in thousands)

	1975	1979	Change
Gross receivables: (20 firms)			
Regulated loan business	$178,054	$183,970	3%
Other finance business	45,084	124,931	177%
Totals	$223,138	$308,901	38%
Small, local companies* (10 firms)			
Regulated loan business	$ 3,307	$ 2,727	-18%
Other finance business	6,023	6,167	2%
Totals	$ 9,330	$ 8,894	-5%
Large, national chains (10 firms)			
Regulated loan business	$174,747	$181,243	4%
Other finance business	39,061	118,764	204%
Totals	$213,808	$300,007	40%

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*Total gross receivables less than $3 million, year-end 1979.

national chains increased the numbers of customers they served by one percent. Since the national firms served many more borrowers, their small percentage increase offset the large percentage decrease of the local companies in absolute numbers of customers served.

Reappraisal of Reasons for Rate Ceilings

Does the evidence provided by the case study of Massachusetts support the reasons typically advanced for the imposition of rate ceilings--especially low rate ceilings? Let us examine these data in conjunction with other research on the issue.

Avoid overburdening consumers with debt. The evidence suggests that a number of potential borrowers, especially those seeking small loans, were "protected out" of the market between 1977 and 1979. The number of regulated loans rose hardly at all, and the number of loans made below $500 fell dramatically. Can we conclude that the borrowers who did not obtain loans from consumer finance companies were better off as a result?

Consumers denied credit by consumer finance companies are likely to be more risky than those granted credit. But that does not mean that they would have defaulted on their loans and thereby been subject to "a threat to stability and psychic harm" [16, p.474]. Studies of debtors with difficulties related to managing their debts suggest that the problem is relatively small. In the aggregate, only a small proportion of consumers appear to have difficulties with their debts. In his survey of 903 debtors who were making instalment payments, Caplovitz [7, p.2-38] found that only seven percent "admitted to some credit trouble in the past." But let us focus on the high-risk potential borrowers whose demands for credit are likely to be curtailed by low rate ceilings. In a parallel study [7, p.2-38] of 1,330 consumers who were in default on their debts, Caplovitz found that even within this group, 60 percent reported that "their current trouble was a new experience." Among the debtors who had experienced previous credit problems the reasons for default were many and varied. Default was not solely a product of financial incompetency. Thus, low rate ceilings have the effect of denying credit to a majority of high-risk consumers who can manage their debts satisfactorily in order to limit credit availability to a minority who can not do so.

Furthermore, low rate ceilings do not prevent high-risk consumers from obtaining credit. If a consumer who wants to borrow cash to buy a color TV is rejected by lenders because of a low rate ceiling, he or she can still obtain credit from credit retailers. Usually located in the inner city, these retailers make most of their sales on credit to high-risk consumers. Because the rates that they are legally permitted to charge are not sufficient to warrant the credit risks that they assume, they raise their "cash" prices to offset their high costs of collection and bad debts. In essence, they transfer part of the finance charge into the cash price. They may even offer "free" credit by sufficiently inflating the cash price of the TV set.

As an illustration, a study by the Federal Trade Commission [10, p.14] in the District of Columbia showed that the average retail price charged by low-income market retailers on a TV set was 43 percent higher than at general market appliance stores. Similar "packing" of the retail price amounted to 53 percent for refrigerators, washing machines, and sewing machines. It is difficult to see how high-risk consumers are protected by being denied the wide shopping choices provided by cash credit and being, instead, relegated to credit retailers.

Assure that consumers pay a "fair" price. No rate ceiling can assure that each consumer pays a "fair" price for a particular credit offer function. Implicit in the concept of a fair price or fair rate is the notion that it is related to the cost of providing the good or service. Thus, fair prices will be found in a competitive marketplace, where lenders compete to serve consumers and where consumers shop for credit.

However, the effect of low rate ceilings is to reduce the level of competition, thereby lowering the probability that consumers will pay a fair price for their credit. A senior staff economist for the NCCF observed with respect to finance companies: "... in high ceiling states competition clearly enhances supply performance" [12, p.1381]. In Massachusetts low rate ceilings clearly did not enhance supply performance. We have noted that over the four-year period from years-end 1975 to 1979, the number of small loan licensees fell to 172 from 266. Also, the number of loans made below $500 declined by 32 percent. Thus, consumers in Massachusetts, especially those needing small loans, were less likely to pay a fair price for their desired credit offer function in 1979 than in 1977.

Administer credit grantors as public utilities. In their 1976 brief supporting lower rate ceilings, the intervenors [6, p.4] argued that much of the blame for the profit squeeze on small firms was "not associated with present rate ceilings, but rather with business management inefficiencies, competition from lower-rate lenders and the evolution of the industry from growth to maturity." Further, it was asserted that an increase in rate ceilings would "artificially sustain inefficiencies by permitting the companies to attempt to pass along to consumers the costs of their inefficiency" [6, p.9].

The results of lowering the rate ceiling in 1977 was, by extension of the intervenors' argument, to make the small companies even less efficient. Their losses increased, their outstandings fell five percent, and many closed or merged offices. In contrast, the national chains increased their outstandings in the regulated loan business only slightly, while doubling their loans in the "other finance business," mainly second mortgages.

An understanding of the economies of scale of large versus small consumer finance companies would have led one to anticipate the result of lowered rate ceilings in Massachusetts. Contrary to the intervenors' implicit assumptions, there is surely no incentive for management of small finance companies to be inefficient, "since the amounts they fail to save are lost by their owners" [4, p.1192]. Instead of attributing their losses to inefficiency, we assign their poor performance relative to large firms primarily to their small scale. A public utility approach to rate regulation in the consumer finance industry would have to allow for the fact "that costs vary from company to company and over time... [but] it is almost impossible for a state regulatory agency to estimate these costs with any accuracy" [4, p. 1194]. Failure to allow for the cost differences among firms in the 1976 rate order in Massachusetts produced the anticipated adverse results for small, local finance companies.

As we have seen, the effect of the intervenors' approach to setting rate ceilings in Massachusetts was to decrease significantly the availability to consumers of regulated loans, especially small ones. At issue is whether the consumers unable to obtain credit from finance companies can turn to other sources for loans, in particular, to commercial banks. The intervenors in Massachusetts argued that "there proves to be no significant differences between customers of banks and finance companies" [6, p.9]. The validity of this argument is examined in the following section.[3]

Characteristics of Consumer Finance Company Customers

It might be argued that the demise of finance companies would not harm consumers, because they could simply borrow from commercial banks. This section will examine the characteristics of consumer finance company customers using data from the national survey performed in 1977 by the Survey Research Center of the University of Michigan. Denied finance company credit, they are most likely to turn, not to commercial banks, but to credit retailers or illegal lenders to acquire the goods and services that they desire.[4]

One would ask why the analysis is not based on a survey of Massachusetts finance company customers. That would not have been an appropriate research design to discover differences in commercial bank and finance company customers for several reasons. First, because the rate ceilings for state banks and finance companies in Massachusetts are low and identical, we would expect to find that after some years there would be little difference between the customers of the two types of creditors. Finance companies would be forced to compete for the higher quality customer as rate ceilings restricted their ability to serve at a profit customers who are less creditworthy or who seek relatively small amounts of credit.

Second, we would like to limit our attention to the customers of local finance companies, because in a low-rate state like Massachusetts the national finance companies tend to restrict service to customers who are eligible for commercial bank credit. In personal interviews with managers of local finance companies and branches of national finance companies, the managers of the local firms indicated that many of their new applicants had been turned down by banks. Conversely, some national chain managers indicated that their primary source of new business was their current customer file and that they could not risk lending to a customer who had been turned down by a bank. However, local finance companies in the state have acquired very few new customers in the past few years because of the effects of the rate ceilings. Consequently, the sample base of new customers would be too small for valid analysis.

A Unique Customer Base For Finance Companies

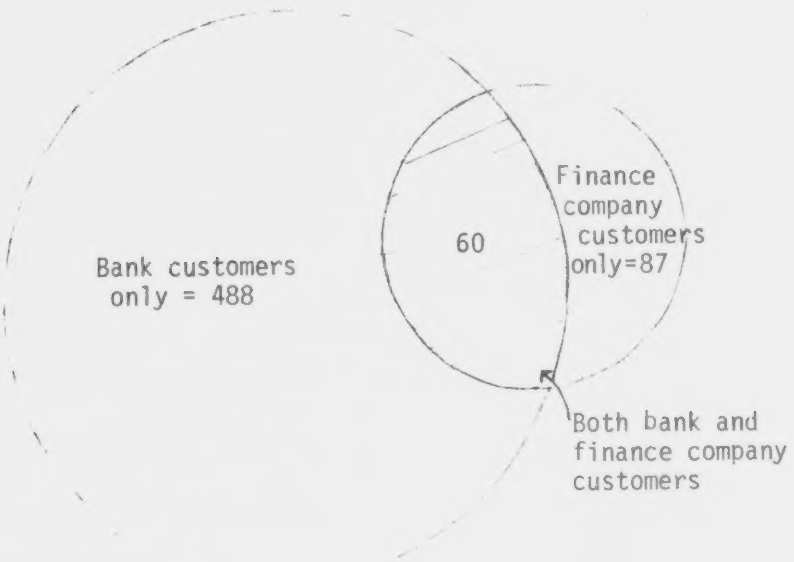
As was indicated before, there are many characteristics of lenders and loan contracts that a consumer considers when shopping for a loan. In some instances, the borrower will have a choice between a commercial bank, a finance company or some other lender. In those cases, the decision could be made on the basis of satisfaction with past experience, finance charge, size of monthly payment or convenience of office location. However, in other cases a borrower seeking a legal loan has little choice and is forced to go to a legal lender of last resort, which is typically a finance company. Consequently, we would not expect to find that all finance company customers are uniquely different from commercial bank customers. However, a portion of finance company customers are expected to have significantly different demographic, risk and attitude characteristics than bank customers.[5]

For the following analysis, two groups of respondents to the national survey were identified: (1) those who had a direct, closed-end, non-mortgage instalment loan(s) from a commercial bank but not from a finance company; and (2) those who had a similar direct loan(s) from a finance company, but not from a commercial bank. Of the total of some 2,600 respondents to the survey 19 percent (488) were classified as solely bank customers by the above segmentation and about three percent (87) were classified as solely finance company customers. Those customers who currently had loans from both finance companies and banks were not included in the analysis.[6] (See Exhibit 5).

We hypothesized that the two groups of customers would differ most significantly in terms of risk characteristics, and attitudes toward the relative importance of terms of credit contracts. The first step in our analysis was to analyze the differences in means across the two groups of a set of variables representing demographic characteristics and attitudes related to the relative importance of different terms of a credit contract. A complete description of all the variables analyzed is provided in Appendix A. Some of the variables were continuous. However, most were categorical and were analyzed as a series of dummy variables. Therefore, rather than have one age variable, there were several age variables that took on a value of one when the respondent's age fell into a certain range.

EXHIBIT 5

GROUP SEGMENTATION OF SAMPLE


Bank customers only = 488
60
Finance company customers only=87
Both bank and finance company customers

Shaded area represents those customers who have loans from both finance companies and banks. N = 60

Bank customers only = 548-60 = 488

Finance company customers only 147-60 = 87

Exhibit 6 presents the results of the analysis of the difference in variable means across the two groups. The right-hand column presents t-statistics, most of which indicate the significance of differences in proportions. The t-statistics were calculated on the assumption that for a relatively large number of observations a binomial distribution can be approximated by a normal distribution. Those variables that are starred (*) had significantly different means across the two groups at the .01 level of confidence.

Variables that had significant mean differences across the two groups were those related to income (Mincome), total assets (Tasset), monthly debt burden relative to income (Pmtinc), education (ED9, ED10), home ownership (Ownrnt3), black or non-black (Race2), ownership of a checking account at a bank (Chkacct), and attitude toward the relative importance of the annual percentage rate (Intrnk0).

Bank customers had higher average monthly income and total assets than finance company customers but owed less in debt payments relative to income each month. The race variable indicates that 26 percent of only finance company customers were black compared to five percent of only bank customers. Only 74 percent of finance company customers had a checking account compared to 94 percent of bank customers. Thirty-six percent of finance company customers rented their principal residence compared to 20 percent of bank customers. The education variables reveal that bank customers were more highly educated than finance company customers.

EXHIBIT 6

VARIABLE MEANS

Variable	Bank Customers N = 488	Finance Company Customers N = 87	t-statistic
Mincome ($)	1575	1219	4.46*
Tasset ($)	6869	2075	3.11*
Assdum	.23	.13	2.54
Pmtinc	.04	.08	2.95*
ED 1	.07	.16	-2.21
ED 2	.02	.05	-1.09
ED 3	.08	.16	-1.95
ED 4	.04	.07	- .97
ED 6	.16	.16	- .03
ED 7	.20	.17	.64
ED 8	.02	.01	.68
ED 9	.14	.05	3.40*
ED 10	.07	.01	3.57*
Sex	.22	.30	-1.51
Ownrnt 3	.20	.36	-2.84*
Race 2	.05	.26	-4.43*
Race 3	.02	.05	-1.09
Chkacct	.94	.74	4.20*
Lnthres (yrs)	12.24	14.51	1.28
NOHH (#)	3.30	3.74	1.38
Age 24	.13	.14	- .22
Age 34	.29	.28	.29
Age 44	.20	.31	2.06
Age 54	.19	.10	2.33
Age 64	.15	.14	.29
Age 74	.03	.03	- .18
Intrnk 0	.35	.52	-2.87*
Intrnk 2	.24	.20	.95
Intrnk 3	.17	.15	.49
Intrnk 4	.02	.01	.68
Pmtrnk 0	.24	.15	2.10
Pmtrnk 2	.27	.22	1.07
Pmtrnk 3	.18	.23	-1.49
Pmtrnk 4	.01	.01	- .10

*Significant at .01 level of confidence, two-tailed test.

When asked to indicate how important interest rate was in a loan contract (Intrnk 0), 52 percent of finance company customers did not rank interest rate among the first four important contract terms, compared to only 35 percent of bank customers. Conversely, 22 percent of bank customers ranked interest rate as the most important term of a loan contract compared to only 12 percent of finance company customers. When the respondents were asked to indicate how important size of monthly payment was relative to other contract terms, (Pntrnk 0) 24 percent of bank customers did not rank the size of monthly payment as the first, second, third or fourth most important term, compared to only 15 percent of finance company customers. The mirror image of those variables reveals that 39 percent of finance company customers thought that the size of monthly payment was the most important term compared to only 30 percent of bank customers.

This analysis suggests that borrowers who are finance company customers, but not bank customers, are demographically different from bank borrowers who are not finance company customers. These differences suggest a risk segmentation between the two financial intermediaries. Consistent with this are the differences in debt burden relative to income and ownership of a checking account. However, finance company customers also have different attitudes toward the relative importance of contract terms than bank customers.

A More Risky Body of Customers

It could be argued that finance company consumers were not commercial bank customers only because of ignorance, fear, or/and distrust of banks. The previous examination of the distinguishing characteristics of the two groups suggests that this is not the case. Several of the key characteristics are also those associated with levels of risk on standard credit-scoring systems; income level, level of education, rent v. own, and possession of checking account. However, to provide a further test of the proposition that these finance company customers would be unlikely to receive bank credit, we applied the scoring system of a large, national commercial bank to the bank and finance company customers. There was not a significant difference between the average credit score of the finance company customers and the average credit score of the bank customers. However, the distributions of credit scores across the two groups were significantly different. The majority of the finance company customers clustered on the lower end of the score continuum while the bank customers were distributed somewhat evenly over the continuum. The distribution of the credit scores suggests the percentages of bank and finance company customers that would not be able to get credit from banks at various cutoff scores. One can see that a cutoff score of 140, where 5.7 percent of bank customers would be denied credit, 34.5 percent of finance company customers would be denied credit (Exhibit 7).

Conclusion

On the basis of personal interviews with local and independent finance company managers, we concluded that the credit needs of those customers who would be rejected by banks in Massachusetts would most likely be met by independent local finance companies. Our analysis of the characteristics of borrowers from banks and finance companies indicates the nature of the finance company customers who would be

EXHIBIT 7

DISTRIBUTION OF CREDIT SCORES

Credit score	<140	140-170	170-183	183-200	201-253	Total
Bank customers	28	192	103	76	89	488
	5.7%	39.3%	21.1%	15.6%	18.2%	100%
Finance company customers	30	43	9	4	1	87
	34.5%	49.4%	10.3%	4.6%	1.1%	100%

$x^2 = 86.88^*$

	Bank Customers	Finance Company Customers
Mean	175.55	150.33
Standard deviation	24.60	20.97
Maximum	249.00	208.00
Minimum	111.00	82.00

Difference in means test t = .01

---

*Significant at .01 level of confidence

denied credit at banks were finance companies to be driven from the market for regulated loans. In comparison to consumers who might be served by banks if they were denied access to finance companies by government regulation, the consumers excluded from the legal cash loan market are more likely to be black; to rent, rather than own their residence; to have lower incomes, lower total assets, and less education. They were less likely to have a checking account and thus an established relationship with a bank. In terms of attitudes towards credit, they were more likely to be concerned about the size of the monthly payment and less likely to view the annual percentage rate as the most important contract term.

While it may be argued that these consumers make up a small percentage of the total market served by finance companies, they are people who have, in their judgment, a need for credit. Many may be creditworthy in the sense that they would meet their monthly payment obligations. We recognize that it is a social, rather than an economic judgment to deny consumers in this lower socio-economic class access to legal cash credit. In our value system, we find it repugnant to restrict their freedom of choice among credit sources by imposing prohibitive rate ceilings.

FOOTNOTES

[1] Even a monopolist would not necessarily charge a ceiling rate if that rate exceeds the price at which his marginal costs equal his marginal revenue.

[2] G.L.C. 140, S100.

[3] Even if all consumers unable to borrow from finance companies could obtain loans from commercial banks at lower rates than from finance companies, they may not be "better off" to patronize banks. The rate is only one aspect of the credit offer function. Also to be considered are the borrowers' time, travel costs, and the value he or she places on the other features of the credit offer function. In a consumer's view a bank loan at 15 percent may be less desirable than a loan from a local finance company at 20 percent. However, this judgment by a consumer may be viewed as "irrational" by those who wish to constrict the range of consumers' choices in the market place.

[4] In a survey of finance companies, referred to as Consumer Finance Companies: CRC 1979 Creditors Survey [14], credit managers indicated that an applicant rejected by their finance company would most likely go to other finance companies or do without the loan.

[5] In his study in Maine, Benston [2, p.37] found that almost half of finance company customers were able to find loans from other sources when most finance companies left that state after the imposition of the 36-month limitation on loan maturities. The greatest proportion (39.8 percent) shifted their debt to another finance company, banks provided loans to 32.9 percent, 20.8 percent borrowed from a credit union, and the balance of 6.5 percent borrowed from other sources. See also [5].

[6] Analysis revealed that 41 percent of finance company borrowers had a loan from both a finance company and a bank. Only 11 percent of bank customers had loans from both a bank and a finance company.

APPENDIX A

VARIABLE DEFINITION

Assdum = 1 if Total Finance Assets was not ascertained. Total Finance Assets was calculated as the sum of the respondent's dollar holdings of U.S. Government Savings Bonds, other Federal Government Bonds, state or municipal bonds, corporate bonds, common or preferred stocks, mutual funds, stock in an investment club, certificates of deposit, savings accounts, and checking accounts.

Pmtinc = is the sum of total regular monthly payments relative to monthly income. Total monthly payments is defined as the sum of rental payments, mortgage payments (first or second), payments for additions or repairs to the home, car payments, car lease payments, monthly payments for purchases of other durables, payments for recreation or hobby items, and other regular monthly payments on debt.

Intrnk 0 = 1 if respondent did not rank interest rate as either the first, second, or third most important thing if the respondent was going to use credit to purchase a car.

Pmtrnk 3 = 1 if respondent ranked size of monthly payment as the third most important thing if the respondent was going to use credit to purchase a car.

ED 2 = 1 if respondent had 8 grades or less of education plus non-academic training.

ED 6 = 1 if respondent had a high school diploma plus non-academic training.

ED 8 = 1 if respondent had a degree from a junior or community college (AA degree)

ED 9 = 1 if respondent had a Bachelor's degree or 17 + years of education but no advanced degree.

Ownrnt 3 = 1 if respondent rented his or her living quarters.

Race 2 = 1 if respondent was of the black race but not Hispanic.

Race 3 = 1 if respondent was Hispanic.

Chkacct = 1 if respondent had a checking account at a bank.

Lnthres = number of years respondent had resided at the current residence.

Age 44 = 1 if respondent was between the ages of 35 and 44.

Appendix A (continued)

Mincome = monthly family income

Tassets = Total financial assets

Sex = 1 if respondent was female.

NOHH = number in respondent's household.

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WORKING PAPER NO. 36

Evidence of the Effect of Restrictive Loan Rate Ceilings on Prices of Consumer Financial Services

Krannert Graduate School of Management – Purdue University

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EVIDENCE OF THE EFFECT OF RESTRICTIVE LOAN RATE CEILINGS ON PRICES OF CONSUMER FINANCIAL SERVICES

A. Charlene Sullivan*

Abstract

This paper investigates the effect of restrictive consumer loan rate ceilings on the provision of and charges assessed by commercial banks for consumer savings and demand deposit services. The study uses data that were collected in four distinct local markets that differed extremely with regard to the applicable rate ceilings. The 31 banks that provided information for the study represented 88.6 percent of the banks serving consumers in the four market areas. Because consumers shop for consumer financial services in their relevant local market, an accurate evaluation of the effects of rate ceilings on terms for household demand and savings deposits can be obtained by holding other socio-economic conditions constant and analyzing differences across market areas.

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The results of the study indicate that in Arkansas, where rates on all types of consumer credit were restricted by the rate ceilings during the study period, the service and overdraft charges assessed on demand deposits were significantly higher than those in states with unrestrictive rate ceilings, holding other things constant. Furthermore, in contrast to the other markets, in Arkansas the sale of loan services was tied more specifically to the sale of other consumer services sold by the bank. However, the rates paid on savings deposits were not lower in the Arkansas market relative to those paid in the other markets analyzed.

EVIDENCE OF THE EFFECT OF RESTRICTIVE LOAN RATE CEILINGS ON PRICES OF CONSUMER FINANCIAL SERVICES

A. Charlene Sullivan

In this study, the effect of consumer loan rate ceilings on price and nonprice terms of consumer demand and savings deposit services is examined. Data collected in a local market study were used to evaluate the effects of restrictive rate ceilings on terms of savings and demand deposit services provided by commercial banks.

I. Price and Nonprice Competition in a Restricted Market

"When a uniform price is imposed upon, or agreed to, by an industry, some or all other terms of sale are left unregulated." [8, p. 148]. Stigler attempted to show that excess profits achieved by suppressing price competition could be eliminated by nonprice competition. For example, when brokerage fees were fixed by law, nonprice competition took the form of free investment information, convenient locations, and plush investment advisors' offices. By the same token, when prices are fixed below the producer's marginal cost of product, nonprice competition could result in a reduction of quality of product, increased implicit costs of obtaining the product, or an arrangement for tying the sale of the price-restricted product to the sale of another product. Alchian and Allen point out in [1] that tie-in sales may be used to overcome price controls. Through the tie-in sale, the producer can capture the value of the controlled product from the consumer in the price of the uncontrolled product. The consumer will be willing to pay a higher price for the uncontrolled product up to the point where the total cost to the consumer of both products is equal to the total value to the consumer of both products.

Commercial banks, until very recently, operated under regulations that restricted the payment of interest on demand deposits to zero. Others have shown [5] that banks engage in nonprice competition and bid away the excess profits that result from their inability to pay interest on demand deposits. This nonprice competition takes the form of multiple branch offices, longer banking hours, free checking accounts, gifts and tokens for adding to savings and checking accounts, or greater credit availability and lower loan rates (APR).

In this study we will evaluate the extent to which laws restricting rates on consumer loans affect prices of consumer demand and savings deposit services, holding other factors constant. Our basic hypothesis is that when restrictive loan rate ceilings keep the price charged on a loan below the bank's marginal cost of product, the bank will adjust by charging higher prices for demand deposit services or offering a lower return on saving services. We also expect to find the sale of bank loan services in areas where loan rates are restricted tied to the sale of savings and demand deposit services.

In an earlier study, Heggestad and Mingo [4] found that price and nonprice terms of household demand deposit services were a function of the structure of the market in which a bank operated. Their basic hypothesis was that "market structure influences the bank's desire to compete for customers. The greater is the degree of monopoly in the market, the higher will be bank prices and the worse will be bank services." [4, p. 108] They used data collected in a telephone survey of 332 banks in 69 metropolitan areas to test their hypothesis. Using cross-sectional regression, they estimated the relationship between various prices and nonprices of consumer services and various measures of market structure, holding constant the effects of other supply and demand variables. They found that in more concentrated bank markets, prices were higher and fewer services were offered to household customers. Thus, to evaluate the extent to which restrictive rate ceilings affect prices and availability of demand deposit services, we must hold constant the effects of market structure on observed prices.

II. The Empirical Data Base: The Local Market Study

Personal interviews of credit grantors were conducted in one local market in each of four states in early 1979. The four market areas selected for the study are identified in the grid below:

Rate Ceilings	Market Area
Very Restrictive	I. Little Rock/North Little Rock, AR
Restrictive	II Racine/Kenosha, WI
Less Restrictive	III. Waukegan/North Chicago, IL
	IV. Lake Charles, LA

The four local markets were chosen for empirical study on the basis of the following criteria:

(1) The markets were in states that had major differences in rate ceilings applicable to consumer credit. The impact of differences in rate ceilings may be diffuse. Consequently, it was necessary to select states with extreme differences in legislation in order to find measurable differences in the effects of regulation. In Arkansas, the ceiling rate was a flat ten percent for all types of credit. The ceiling rates allowed under the Wisconsin Consumer Act (WCA) were 18 percent APR up to $500, 12 percent on the unpaid balance above $500 up to $25,000. Louisiana and Illinois had relatively high rate ceilings. The ceiling rates in Louisiana were 36 percent per year up to $800, 27 percent on the balance above $800 to $2,000, 21 percent on the balance above $2,000 to $3,500 and 15 percent on the balance up to $25,000. In Illinois the law allowed an eight and one-half percent add-on rate, which is approximately equal to 19 percent APR. See Appendix A for more information about the regulations in the four markets. During the study period, the loan rate ceiling in Arkansas was restrictive for most types of consumer credit. The ceilings in the other three states were not restrictive for all types of loans.

(2) Markets were chosen to minimize differences in socio-economic characteristics of the residents especially in the case of the northern "paired" cities. The need for multivariate empirical work to adjust for these differences was reduced by matching cities, insofar as possible, in terms of the nature of the industrial base and socio-economic characteristics of the residents. A summary of the socio-economic characteristics of the population in each market is shown in Appendix B.

Local markets were chosen as a basis for research for two reasons. First, local markets are where most consumer financial services are delivered. Second, using a local market data base allowed us to control adequately for differences in market structure.

Structure of Banks in Markets

Thirty-one of 35 commercial banks in the four market areas participated in the study. These banks represented 88.6 percent of banks serving the markets and held approximately 92 percent of all bank assets in the four markets. (See Exhibit 1 for an analysis of bank response to survey.)

The average size of bank was smallest in Wisconsin and largest in Arkansas (Exhibit 2).[1] Using the Herfindahl index as a measure of concentration, bank assets were considerably more concentrated in the Louisiana market than in the other markets.[2] These data indicate that there was considerable variation across the four markets in terms of the structure of banks in the markets. In the Arkansas market the banks serving the market were relatively large, but bank assets were relatively unconcentrated.

III. The Evidence

We evaluated the effect of restrictive rate ceilings on prices and terms of savings and demand deposits. Since there are many different dimensions along which banks can adjust, and our sample was small, the effects were diffuse and difficult to identify with statistical significance.

EXHIBIT 1

COMMERCIAL BANK RESPONSE RATE

Market		Total Number of Banks in Area	Response Rate	% of Total Market Area Bank Assets
I.	Little Rock/North Little Rock, AR	8	88%	98%
II.	Racine/Kenosha, WI	15	80	71.5
III.	Waukegan/North Chicago, IL	7	100	100
IV.	Lake Charles, LA	5	100	100
	Total	35	88.6%	92%

SOURCE: CRC 1979 Creditors Survey, Credit Research Center, Purdue University

EXHIBIT 2

STRUCTURE OF BANKS

(IN EACH LOCAL MARKET)

	AR	WI	LA	IL
Average size (millions) (total assets)	$249	$48.5	$134.5	$52.8
Herfindahl index	.196	.147	.376	.204

SOURCE: 1979 CRC Creditors Survey, Credit Research Center, Purdue University.

Savings Instruments

As a result of limited gross earnings on loans made in a restrictive-rate state, one might hypothesize that rates paid to savers would be lower in those areas than rates paid in the unrestricted areas. However, the relevant market for savings instruments is a national one (money market funds, Treasury bills) and savings institutions would be unlikely to follow such a strategy. In Exhibit 3 we show the average rates paid on various savings instruments by the banks and savings and loan associations serving each of the market areas. The table indicates very little variation in average rates paid in the four market areas by commercial banks and no variation in the average rates paid by savings and loan associations in the four areas--each association was paying the maximum rate allowed by law. Thus, the restrictive loan rate ceilings in Arkansas had no effect on the rates that savers earned on savings deposits at banks (or at savings and loan associations).

Prices of Demand Deposit Services

We tested our hypothesis that restrictive rate ceilings would affect explicit and implicit prices of a bank's household demand deposit services, holding constant the structure variables, by regression analysis of four "prices" of services: (1) number of hours per week that a bank's offices were open to service household consumers; (2) charges levied by a bank for a nonsufficient funds (NSF) check; (3) whether a bank offered a special checking or check overdraft account; and (4) whether a bank offered automatic teller services. We also analyzed service charge schedules on household demand deposits in the four market areas.

EXHIBIT 3

AVERAGE RATES (APR) PAID ON SAVINGS INSTRUMENTS BY SAVINGS INSTITUTIONS BY MARKETS

Savings Instrument	Banks N=31				Savings and Loan Associations[2] N=21			
	WI	IL	AR	LA	WI	IL	AR	LA
$1000 CD - 90 day	5.5	5.5	5.4[1]	5.5	5.75	5.75	5.75	5.75
$5000 CD - 90 day	5.5	5.5	5.4[1]	5.5	5.75	.575	5.75	5.75
$1000 CD - 1 year	6	6	6	6	6.5	6.5	6.5	6.5
$5000 CD - 1 year	6	6	6	6	6.5	6.5	6.5	6.5
$1000 CD - 4 year	7.25	7.14	7.14	7.25	7.5	7.5	7.5	7.5
$5000 CD - 4 year	7.25	7.20	7.14	7.25	7.5	7.5	7.5	7.5
$1000 CD - 6 year	7.5	7.5	7.5	7.5	7.75	7.75	7.75	7.75
$5000 CD - 6 year	7.5	7.5	7.5	7.5	7.75	7.75	7.75	7.75
Passbook account	4.9	5.0	5.04[1]	5.0				

[1] In the Arkansas market, one bank followed a strategy of paying a rate other than the maximum rate allowed by law for several types of savings instruments.

[2] This represents the average rate paid on savings by 100 percent of savings and loan associations in each market.

SOURCE: 1979 CRC Creditors Survey, Credit Research Center, Purdue University.

The following equation was estimated for each "price" variable, Y_i:

$$Y_i = f(S_i, C, MS_i, LR)$$

where the independent variables are:

S_i = total assets of the bank at year-end, 1977.

C = concentration of bank assets in the relevant local market, measured by the Herfindahl index.

MS_i = bank's share of total bank assets in the relevant market at year-end, 1977.

LR = binary dummy variable for the restrictive loan rate ceiling in Arkansas.

The dependent variables analyzed (Y_i) were:

HRS = average number of hours per week bank offices were open for household customer services.

NSF = charge for each non-sufficient funds (NSF) check.

SP = binary variable representing whether a bank offered special overdraft checking accounts.

ATM = binary variable representing whether a bank offered automatic teller services.

The means and standard deviations for each variable are shown in Exhibit 4. Variables representing differences in demand conditions across the four market areas were not included, because the local markets were selected for the study such that factors affecting demand conditions would be approximately the same in each market.

EXHIBIT 4

INDEPENDENT AND DEPENDENT VARIABLES

	Mean	Standard Deviation	N
1. Number of hours offices open per week	43.65	8.72	31
2. NSF check charge	$5.13	1.34	31
3. Offer special checking accounts (1=yes)*	.48	.51	31
4. Offer ATM service (1=yes)*	.39	.50	31
5. Herfindahl index	.21	.08	4
6. Market share	.12	.12	31
7. Size (total assets)	$109M	128M	31
8. Low rate state (1=yes)*	.23	.43	

*The binary variable mean represents the percentage of the total sample that offered the service in question or that operated under the specified regulatory condition.

For the analysis, a step-wise regression technique was used where the variable representing the restrictive rate ceiling state entered first, followed by the bank size, concentration, and market share variables. The rate ceiling dummy variable and the size variable were strongly and positively correlated as were the size and market share variables. As a result of the multicollinearity among the independent variables the variable coefficients are unbiased but inefficient.

The results indicate that, holding constant differences in market structure, banks in the Arkansas area were open to provide consumer services fewer hours per week and charged a significantly higher fee each time a consumer overdrafted a check account relative to banks in the other market areas analyzed (Exhibit 5). Banks in Arkansas were more likely to offer special checking and automatic teller services than banks in the other markets but the coefficients for the low-rate variable were not significant.[3] The signs of the coefficients of the structure variables in each equation were consistent with those found by Heggestad and Mingo [4].

Other Evidence Concerning Pricing Of Demand Deposits

To analyze the effect of restrictive rate ceilings on specific service charges on demand deposits, three types of information were used: (1) aggregate data concerning demand deposit service charges relative to total demand deposits taken from the FDIC Statement of Condition Report for all banks in the market areas (including the specified local markets) as defined by the FDIC; (2) information on demand deposit service charges

EXHIBIT 5

REGRESSION COEFFICIENTS OF INDEPENDENT VARIABLES

(t-values in parentheses)

	α	LR	S_i	C	MS_i	R^2	F
1 HRS_i	59.37	-4.90	-.0000	-67.27	-4.25	.45	5.24*
		(-1.01)	(-.05)	(-3.77)*	(.19)		
2 NSF_i	3.81	1.63	-.0001	+5.49	-1.02	.29	2.60**
		(1.92)**	(-.15)	(1.76)**	(-.26)		
3 ATM_i	.13	.38	.0000	-.094	.57	.40	4.35*
		(1.31)	(.84)	(-.089)	(.43)		
4 SP_i	.60	.27	.0000	-.48	.18	.04	.30
		(.73)	(-.52)	(-.35)	(.11)		

*Significant at five percent confidence level

**Significant at ten percent confidence level

SOURCE: CRC 1979 Creditors Survey, Credit Research Center, Purdue University.

from brochures gathered by interviewers in the local market banks; (3) responses given by bank managers to questions concerning the extent to which charges for demand deposit services were raised when market interest rates rose above the maximum loan rate allowed by law.

Aggregate Data

Service charges on demand deposits relative to total operating income and total IPC (Individual, Proprietor, and Corporations) demand deposits were generally higher in the southern states than the northern states included in the study. The following aggregate information was collected from the FDIC Statement of Condition Reports for 1977:

Market Area in:	Demand Deposit Service Charges/Operating Income[4]	DD Service Chg./ IPC Demand Deposits[4]	Herfindahl Index
Arkansas	3.64%	.98%	.196
Louisiana	3.97	.86	.376
Illinois	1.05	.40	.204
Wisconsin	1.37	.48	.147

The relatively high charges in the Louisiana market and the low charges in the markets in the northern states could be partially explained by the level of concentration of bank assets in those markets.[5] In the Arkansas market, the high level of service charges relative to income and total IPC demand deposits suggests that, holding constant the effect of concentration on service charges, service charges on consumer demand deposit accounts were relatively higher than those in the northern markets.[6]

Brochure Data

Data concerning service charges on regular checking accounts were tabulated from pamphlets and brochures collected from the surveyed banks (Exhibit 6). Comparison of regular checking account charges in the four state areas reveals interesting differences. In Arkansas, a maximum charge of $4 per month for checking account balances less than $100 was reported by three of the seven banks interviewed. One bank charged $4 per month plus a per-check charge if the balance in the checking plus savings account fell below $500. By contrast, only one bank in Louisiana charged a $4 monthly fee when the minimum balance was less than $100. No free checking was available in the southern states. In Illinois, four of the seven banks interviewed provided free checking. In Wisconsin, information on check charges was available from only five of the 12 banks surveyed. Of those five, three provided free regular checking accounts where the customer paid only check printing charges. The other two required a minimum balance for free checking but did not specify charges that would be incurred when the balance fell below the minimum. These data also indicate that prices for demand deposits were generally higher in the southern states than the northern states.

Questionnaire Data

Each bank manager was asked what types of changes had been made by bank management in response to increases in market interest rates which had occurred in the six-month period before the survey. The managers were

EXHIBIT 6
CHECKING ACCOUNT CHARGES

Arkansas			Wisconsin		
# of Banks	Minimum Balance	Monthly Charge ($)	# of Banks	Minimum Balance	Monthly Charge ($)
2	≥ $300	$0	1	$100	$0
	200-299	2			
	100-199	3			
	< 100	4			
1	≥ 300	0	2	Free checking. Only charge for check printing	0
	< 300	3			
1	> $400	0		Free checking. Only charge for check printing	0
	300-399	1			
	200-299	2			
	100-199	3	1	Free checking.	0
	< 100	4			
1	> $200	0	1	> $200 Pay only check printing charge. Else pay per check	0
	100-199	2			
	0-99	3			
1	$200	0	7	No information	
	< 200	2			
1	< $500*	4+15¢/check			
	500-999	2+15¢/check			
	1000-2999	15¢/check			
	> 3000	0			

*checking plus savings balance

EXHIBIT 6 (continued)

Illinois			Louisiana		
# of Banks	Minimum Balance	Monthly Charge ($)	# of Banks	Minimum Balance	Monthly Charge ($)
1	$200	$0	1	> $400	$0
	< 200	3		300-399	1
				200-299	2
1	< 100	3		100-199	3
	100-199	2		< 100	4
	200-299	1			
	< 300	0	1	$300	0
				< 300	0
4	Free checking				.06 per check
			1	> 250	0
				< 250	2.50
1	No information		2	No Information	

asked if any changes had been made in charges on checking accounts as a result of increases in the cost of money. In Arkansas, 57 percent of bank managers said that charges on checking accounts had been increased compared to 14 and 40 percent in Illinois and Louisiana respectively and 25 percent in Wisconsin, an indication that demand deposit customers in Arkansas were more likely to be affected by increases in the banks' cost of capital than deposit customers in the other three markets. In the other markets, various loan terms were adjusted to reflect changes in market interest rates. See Peterson [7] for a complete analysis of changes in loan prices and savings rates offered as a result of changes in the general level of interest rates.

Tie-in Sales of Loans and Demand Deposits

Finally, we examined the extent to which the sale of a personal loan was tied to the sale of demand deposit or other bank services. We expected to find that banks in Arkansas would be more likely to require their loan customers to have a checking account at the lending bank because of tie-in pricing of the two products. We asked bank managers to indicate what factors were emphasized in their marketing efforts for direct consumer loans. The factors that they chose from were low rates, easy credit, convenient locations, convenient hours, tie-in with other services and service in general. The distribution of responses for each factor are shown in Exhibit 7.

Bankers in Louisiana were most likely to emphasize convenient locations in their loan advertisements. Bankers in Illinois were most likely to emphasize convenient hours. Bank advertisements for direct consumer loans in Arkansas and Wisconsin were most likely to

EXHIBIT 7

FACTORS EMPHASIZED IN MARKETING OF CONSUMER LOANS

(RESPONDENTS CHOSE ONE OR TWO FACTORS)

	Wisconsin	Illinois	Arkansas	Louisiana
Low Rates	0%*	29%	0%	20%
Easy credit terms	25	57	0	20
Convenient locations	36	0	43	80
Convenient hours	27	71	14	20
Tie-in with other services	54	14	57	40
Service	58	29	86	20

*Numbers represent the percent of bank managers that emphasized the particular factor in their marketing for direct consumer loans.

SOURCE: CRC 1979 Creditors Survey, Credit Research Center, Purdue University.

emphasize service. Bank managers in Arkansas indicated "tie-in with other services" 47 percent of the time compared to 40 percent for managers in Louisiana and 14 percent of managers in Wisconsin. Service was described by bankers in Arkansas as personal friendly service, courtesy, speed and cross-selling.

IV. Conclusions

The results of this study indicate that, holding other things constant, banks operating under restrictive loan rate ceilings had higher service charges on demand deposit accounts and checking account overdrafts and were open fewer hours per week to provide consumer services than banks operating in less restricted markets. In addition, in the Arkansas market, the sale of personal loans was more likely to be tied to the sale of other bank services relative to the other markets. We conclude that when income from the loan activity was restricted by regulation, Arkansas banks earned their required return on loans by tying the sale of a loan to that of a product or products that were not restricted in price. The results also indicate that savings account customers did not earn a lower return than that available to consumers in the other markets. This follows from the fact that the market for savings is national in scope.

FOOTNOTES

[1] Little Rock is the largest city in the state of Arkansas, the capital and the financial center of the state. Thus, the relatively large bank size in that market could be attributable to government and correspondent banking activities.

[2] Herfindahl index is equal to $\sum^{i} (MS_i)^2$ where MS is the market share of bank i in its relevant market area. Data for banks not responding to the survey were included in the calculation of the index for each market.

[3] Large sampling error due to the small sample size creates a problem in this analysis. Multicollinearity in the independent variables results in unbiased but inefficient coefficients which may have no statistical significance.

[4] This information was not collected for each respondent bank. Therefore, the figures used were taken from 1977 Statements of Condition reported by the Federal Deposit Insurance Corporation. The Statements of Condition are reported for all insured banks within a state and all insured banks within major market areas within a state. For each market area used in the study, the information for all banks in the corresponding market were extracted. For each market area other than the Illinois market, the respondent banks held more than 60 percent of the total bank assets in the market area as defined by the FDIC.

[5] The results of the previous regression analyses suggests that NSF charges were significantly positively related to the level of concentration in a market.

[6] In many banks, schedules for service charges on personal demand deposits are published but many individuals are exempted from paying through various special programs. Thus, the differences across states could be attributable to differences in banks' exemption policies.

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APPENDIX A: REGULATIONS FOR EACH LOCAL MARKET

TABLE 1: DATA ON LOAN RATES & CREDITOR'S REMEDIES FOR SELECTED STATES*

	Ark.	Ill.	La.	Wisc.
I. Remedies				
1. Fees clauses allowed	Yes	Yes		Yes
2. Conf. judgment allowed		Yes	No for small loans and after maturity	No
3. Blanket security	Yes	Yes	Requires notarized list of security	Restricted
4. Waiver of exemption	Yes	Yes	Yes	Yes
5. Repossession	Yes, UCC	Yes, UCC	No self-help	Judicial
6. Deficiency judgment	Yes, under UCC	Limited election	No UCC	Limited election
7. Garnishment (exemptions)	$200/person $900 HH head &25/week	$65/$50 week or 85% or Federal	$70 or prohibited	75% or 40 x min. wage + $15/dependent
8. Wage assignments	Yes but restricted	Restricted	Yes but restricted	Restricted
9. Late charges	No provision	5% or $10	Deemed interest must be less than max. rate 3% or $5	3% or $3
10. Collection charges	No provision	Attorney's & court fees	Attorney's fees up to 25% of balance due	Severely limited No attorney's fees
II. Rate Ceilings				
1. Retail revolving: rates and point where lower rate is effective	10%	1.8% monthly, 70¢ min bank 1.5% monthly	1.5% A.D.B., monthly 50¢ min	1.5%, 1% above $500
2. $3,600 3 yr. new auto loan	10%	14.55	15.00	12.83
3. $1,000 1 yr. small loan	10%	25.67% small loan or 18.57%, CI Loan Act refin. charge	35.45%	18.52% DLA or 16.31% WCA

*Sources are Feldman and Reiley (1977) and Gushee (1978).

APPENDIX B: THE LOCAL MARKETS

The local markets selected for the survey had to meet a number of requirements. First, they had to be located in states with substantial differences in rate ceilings and restrictions on creditors' remedies. Second, they had to encompass well defined market areas. Since consumer credit shopping is ordinarily confined to local markets, it was important that each survey area be self-contained. Third, each market had to contain a labor market where a relatively high proportion of workers was employed in construction, manufacturing, or trade. This requirement was established so that each locality would include a high proportion of people who might be dependent on fluctuating sources of income and, thus, might be relatively risky credit users. Finally, it was deemed desirable to include in the survey two adjacent localities that had many similar socio-economic characteristics, but differed in that they were located in states with substantially different creditor remedies and rate ceilings.

The adjacent markets selected for study were Racine/Kenosha, Wisconsin and Waukegan/North Chicago, Illinois. In addition, Lake Charles, Louisiana and Little Rock/North Little Rock, Arkansas were selected for study because of the unique laws applicable in each state. These cities met all of the study's requirements with only minor deviations.

A principle deviation was that the proportion of workers employed in cyclical industries (at 45 percent in manufacturing, trades, and construction) in the Arkansas market was somewhat below the proportion employed in such occupations in the other markets--particularly the

Northern markets. However, mitigating factors--principally the fact that Little Rock was the only large city in central Arkansas and, as such, would be expected to be the site for consumer finance companies if any operated in the state, overcame this limitation. A second deviation lay in the fact that average incomes generally were higher in the Northern than in the Southern cities. However, this could be explained by North-South "cost-of-living" differences, so it need not invalidate North-South comparisons so long as such differences are taken into account when appropriate. In spite of the income differences, the educational status of residents in both the Northern and Southern cities was quite similar.

An extensive set of economic and social characteristics applicable to each market was compiled before the surveys were undertaken. Those data are presented in the following table.

TABLE 1

SOCIO-ECONOMIC DATA ON SURVEY CITIES

Market Characteristic	Illinois North Chicago	Illinois Waukegan	Wisconsin Racine	Wisconsin Kenosha
Population (000)	47	65	95	79
Population per sq. mi. (000)	8.01	4.05	7.26	5.75
Pop. change 1960-1970 (%)	106.1	17.1	6.8	16.1
White population	39	56	85	77
Black population	8	8	10	2
Change in black '60-'70 (%)	71.2	86.3	+114	105.0
Median age	20.0	27.6	27.2	27.3
One person H.H. (000)	.7	3.7	5.6	4.2
Age 25 or over (000)	13	35	50	42
Median schooling	12.1	12.2	11.9	11.9
H.S. Grad (%)	53.7	56.7	49.5	49.1
Labor force (000)	32	30	39	32
Civilian labor force (000)	6	29	39	32
Female labor force (000)	3	12	15	12
Married female labor force (%)	64.5	57.4	54.9	57.2
Unemployed (%)	4.3	3.3	5.1	4.7
Employed (000)	6	28	38	30
Employed in mfg. (%)	35.7	35.9	48.4	43.8
Employed in trade (%)	14.8	17.4	17.9	19.6
Employed in services (%)	6.8	6.5	5.3	4.0
Employed in education (%)	5.4	5.9	7.0	8.2
Employed in construction (%)	2.6	4.6	2.2	3.4
Employed in gov't. (%)	28.2	18.4	11.2	12.4
White collar employment				
Professional or managerial (%)	14.8	21.9	19.8	19.5
Sales employment (%)	24.1	27.9	24.4	22.1
Craftsmen & foremen (%)	12.3	13.1	14.0	14.8
Income under $3,000 %	5.5	5.5	6.3	6.3
3 to 5 K %	8.7	6.9	7.8	7.7
5 to 7 K %	19.7	9.0	9.5	9.[illegible]
15 to 25 K %	13.1	23.3	17.3	15.6
25 K or more %	2.1	4.7	3.1	2.3
Median (family) income	8,898	11,473	10,522	10,191
Median for whites	8,776	11,796	10,730	10,244
Median for blacks	10,019	8,448	7,684	7,313
Per capita income	2,432	3,656	3,193	3,039
% below poverty level	6.8	6.0	6.6	6.1
Avg. persons per household	3.6	3.1	3.2	3.3
Owner occupied housing (%)	37.3	57.8	63.8	66.2

TABLE 1 (CON'T.)

Market Characteristic	Illinois		Wisconsin	
	North Chicago	Waukegan	Racine	Kenosha
Manufacturers (#)	28	76	244	106
% **with** 20+ employees	53.6	48.7	40.6	37.7
Retail trade outlets (#)	117	589	868	721
% **with** payroll	72.6	81.0	76.2	73.2
Retail sales (million $)	12.16	166.45	166	121
Change '63-'67	38.3	29.5	23.5	13.4
Food (% of retail sales)	15.2	19.6	28.5	25.0
Auto (% of retail sales)	D	16.1	15.8	12.3
General mdse. (% retail sales)	D	21.4	15.3	17.3
Wholesale outlets (#)	9	90	131	78
Sales (million $)	3.16	101.57	102	45
# of banks	1	5	7	5
# extra branches	0	0	2	0

D - withheld to avoid disclosure

TABLE 1 (CON'T.)

SOCIO-ECONOMIC DATA ON SURVEY CITIES

Market Characteristic	Arkansas		Louisiana
	Little Rock	N. Little Rock	Lake Charles
Population (000)	132	60	78
Population per sq. mi. (000)	2.51	2.33	3.391
Pop. change 1960-1970 (%)	22.9	3.5	23.0
White population	99	50	54
Black population	33	10	25
Change in black '60-'70 (%)	31	-27.3	77.1
Median age	30.3	30.3	24.3
One person H.H. (000)	9.7	3.3	3.7
Age 25 or over (000)	75	34	38.1
Median schooling	12.4	12.1	12.0
H.S. Grad (%)	64.1	54.2	50.5
Labor force (000)	57	25	28
Civilian labor force (000)	57	24	28
Female labor force (000)	25	10	10
Married female labor force (%)	53.5	64.2	56.0
Unemployed (%)	3.3	3.1	6.2
Employed (000)	55	24	26
Employed in mfg. (%)	16.4	17.4	15.2
Employed in trade (%)	21.5	22.9	23.9
Employed in services (%)	9.4	8.9	10.6
Employed in education (%)	7.6	5.6	10.1
Employed in construction (%)	5.3	6.3	9.3
Employed in gov't. (%)	20.8	17.4	15.8
White collar employment			
Professional or managerial (%)	29.6	23.7	25.0
Sales employment (%)	29.7	29.3	24.6
Craftsmen & foremen (%)	9.9	14.4	14.8
Income under $3,000 %	12.2	13.0	14.8
3 to 5 K %	12.4	12.4	12.3
5 to 7 K %	13.4	12.8	14.1
15 to 25 K %	13.8	11.6	12.3
25 K or more %	5.0	2.5	3.1
Median (family) income	8,785	8,467	8,297
Median for whites	10,075	9,190	9,883
Median for blacks	4,835	3,510	4,634
Per capita income	3,165	2,764	2,600
% below poverty level	13.5	14.7	17.5
Avg. persons per household	2.9	3.0	3.4
Owner occupied housing (%)	60.3	62.7	64.5

TABLE 1 (CON'T.)

Market Characteristic	Arkansas Little Rock	 N. Little Rock	Louisiana Lake Charles
Manufacturers (#)	220	67	45
% with 20+ employees	41.4	29.9	28.9
Retail trade outlets (#)	1,515	658	716
% with payroll	71.9	63.5	70.5
Retail sales (million $)	318	100	136
Change '63-'67	36.3	19.6	35.3
Food (% of retail sales)	18.0	22.8	22.5
Auto (% of retail sales)	22.8	33.5	19.6
General mdse. (% retail sales)	17.1	3.1	19.6
Wholesale outlets (#)	427	112	126
Sales (million $)	543	119	112
# of banks	7	2	5
# extra branches	27	7	9

Sources:

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WORKING PAPER NO. 37

Household Financial Behavior: Implications For Consumer Spending

Krannert Graduate School of Management – Purdue University

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HOUSEHOLD FINANCIAL BEHAVIOR: IMPLICATIONS FOR CONSUMER SPENDING

Charles A. Luckett*

Abstract

Consumer credit expanded rapidly during 1977-78, generating widespread concern that households were building a debt repayment obligation heavy enough to trigger a recessionary decline in consumption expenditure. Prospects of sharp increases in loan delinquencies and losses on the enlarged consumer debt carried worrisome implications both for consumer spending and finance industry profitability.

This working paper is divided into two sections: the first investigates, from the evidence of aggregate economic data, the extent to which households may have become overextended between 1977 and 1979; the second section uses household survey data to examine borrowing behavior from a microeconomic perspective, and particularly to explore how the major expenditures of individual households are affected by large preexisting debt obligations.

Based upon U.S. aggregate data on installment credit growth rates, debt payment obligations relative to income, and trends in household net worth, "nondiscretionary" spending, and loan delinquency rates, it is suggested that the financial condition of households had not deviated greatly from earlier experience during periods of economic expansion.

The household survey data (from surveys conducted in 1970, 1977 and 1978) provide a variety of insights into household financial developments. It was found, for instance, that between 1970 and 1977 the proportion of households in debt had increased most sharply for the lowest and highest income

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segments of those surveyed; that the lowest-income debtors experienced the largest increase in annual debt repayments relative to income, but that the highest-income group accounted for the largest share by far of the increase in outstanding debt. It was also concluded that population shifts between 1970 and 1977 have had almost no perceptible influence on the proportion of all households having some installment debt or in the average amount of debt outstanding per household. Finally, analysis of spending on major durable goods revealed little evidence that initial levels of debt payments relative to income retard such spending.

HOUSEHOLD BORROWING BEHAVIOR: IMPLICATIONS FOR CONSUMER SPENDING

While consumer credit was growing rapidly from early 1977 well into 1979, much attention was focused upon the debt burden of households and its implications for the future course of consumer spending. Aggregate debt burden measures--such as debt outstanding or the volume of repayments relative to disposable personal income--were rising steadily. Concern arose that excessive debt expansion could lead to a marked weakening of consumption, as the burden of heavy debt repayments exerted a larger and larger claim upon current income.

Some of the evidence on borrowing behavior available from economic aggregates is examined in Part I, but proper interpretation of these broad measures may depend crucially upon the behavior of various factors, not readily measurable, which underly their movement. Part II of this paper provides a microeconomic perspective on some of the issues surrounding aggregate credit developments, through exploration of household survey data on debt use. These microeconomic data were collected by the University of Michigan's Survey Research Center in its 1970 *Survey of Consumer Finances* and in two more recent surveys: an August 1977 canvass of 2500 households and an August 1978 reinterview of about half of the original 1977 panel.[1]

I. AGGREGATE ECONOMIC INDICATORS

A. Growth in Credit

Part of the concern that arose regarding the rapid growth of consumer credit may reflect some degree of "money illusion"--an easy trap to fall into in the present inflationary environment. Consumer credit expanded by $35 billion in 1977 and by $45 billion in 1978, an amount double the amount of expansion in any year before 1977 (see Exhibit 1). Nevertheless, when this large volume of credit is converted to an annualized percentage rate of growth, it becomes apparent that the rate of expansion in 1977-78 was not greatly out of line with previous periods of growth. If installment debt outstanding is deflated by a general price index and the growth rate recomputed, the 1977-78 credit expansion appears almost indistinguishable from previous expansions (Exhibit 2).

B. Debt Relative to Income

To measure the degree of household debt burden, observers have frequently focused upon ratios of aggregate debt relative to disposable income--either debt repayment, debt outstanding or occasionally the net expansion in consumer debt. The last measure, however, is a better guide to current borrowing activity than to cumulative debt burden.[2] More often cited as an index of debt burden is the ratio of debt repayments to disposable income. This ratio is presented in Exhibits 3 (table) and 4 (chart), for consumer installment credit only and for consumer plus mortgage debt. These ratios have reached new high ground, but the small margin seems a rather slim basis on which to conclude that consumers have seriously overborrowed. Such a conclusion would be particularly tenuous in light of various difficulties in interpreting aggregate data, some of which are outlined below.

1. The aggregate data provide no indication of the underlying distribution of debt. If debt rises relative to income, is it because a greater proportion of people are borrowing? Or, might a constant or declining proportion be borrowing more heavily? Who is responsible for most of the increase--poor people with limited ability to service debt, or relatively well-off people who simply find it advantageous to borrow? Some of these questions are explored in Part II.

2. The content of the data on installment debt has changed over time. In particular, the inclusion of the fast growing revolving credit segment has complicated interpretation of installment debt repayments. Many individuals use credit cards simply as a convenient substitute for cash or check transactions, rather than as a means to "borrow." In the 1977 Survey, about half the cardholding respondents claimed to almost always pay revolving accounts in full within one billing period. Yet, with no means to exclude such convenience credit, the Federal Reserve includes it in its published consumer credit statistics, thereby imparting an upward bias to measures of installment debt burden.

3. Shifts in maturity structure affect the levels of debt repayments and outstandings. In the short-run, a lengthening of maturities in the late 1970's tended to hold down repayments and raise the level of outstandings. For the long-run, a stretchout of the repayment schedule tends to make the repayments series more stable, and less capable of dropping to "safer" levels during periods of economic slowdown.[3]

C. Household Balance Sheet

Beyond the various aggregation and measurement problems, it may be argued that the debt-to-income ratios represent a seriously incomplete picture of household capacity to handle debt and to maintain a high level of expenditure. Balance sheet considerations may provide a more fundamental perspective from which to view the impact of debt on household behavior. It is certainly true that income constitutes only one source of funds for servicing debt or for supporting outlays on goods and services in the face of high debt payments. Assets should also be taken into account. Exhibit 5 graphs movements for the last several years in financial assets and liabilities of the household sector taken from the Federal Reserve's Flow-of-Funds accounts. Financial net worth is shown in the lower panel. Clearly, current dollar asset growth has kept pace with the rapid growth in household debt during recent years, and financial net worth has climbed fairly sharply.

One criticism of Exhibit 5 is that the current-dollar denominations distort the true financial status of households--constant dollar financial net worth would likely bear more directly upon consumer behavior. It would also seem appropriate to adjust for population growth in tracking wealth changes over time. Reflecting these considerations, the top panel of Exhibit 6 shows financial net worth per capita in constant dollars. In this light, the household sector's balance sheet position by 1979 appeared less sanguine than in the context of current dollar net worth, at least on the surface. In real terms, per capita financial net worth in mid-1979 was considerably below levels reached in 1968 and 1972. Although real net worth was above the lows during the 1974-75 recession, the gain had been quite modest for a period of economic expansion, and even a slight decline was observable during the most recently plotted 8 to 10 quarters.

While one might interpret the sluggishness of real financial net worth as a condition of impaired liquidity that was reducing the capacity to spend, this development might better reflect a conscious and rational shift of households from financial towards tangible assets during a time of rapid inflation. In part because of regulatory restraints, yields on interest-bearing assets most commonly owned by households may not have fully reflected expected inflation rates, and the differing tax treatment of interest income and capital gains creates additional incentives to invest in tangible assets in an inflationary environment. When tangible assets are included in a calculation of household net worth, as in the bottom panel of Exhibit 6, the sector's balance sheet appears much stronger. The principal ingredient in the growth of tangible assets, of course, has been the sharply inflated values of homes in recent years. But it is reasonable to believe that many households take into consideration their home equity in planning expenditures, and in fact, liquefication of this equity has been an important source of funds to the household sector.[4]

One is thus left with several measures of household asset positions, each appearing to tell a somewhat different story. Which is the most relevant may depend upon the nuance of the question asked. On the one hand, if one were concerned with the independent effect of the balance sheet position on consumer spending, there may have been little reason to fear a retrenchment due to over-indebtedness. Net worth including tangible assets had been well maintained in real terms in the 1977-79 period. Household liquidity may have fallen, but to the extent that diminished liquidity represented a preferred position in an inflationary environment, little slowdown of spending need have been implied. On the other hand, the less liquid character of household finances might have implied greater vulnerability to any economic slowdown initiated through other causes. That is to say, while it may not have seemed likely that consumers would lead the way into recession because of their debt load, they might be thought more vulnerable than usual to any recession that might develop.

Generally speaking, few empirical studies of the impact of debt burden on consumer spending have been done.[5] One problem, perhaps, is that, despite the analytical superiority many economists find in the portfolio adjustment approach to the question, aggregate balance sheet data are afflicted with many of the same problems as the debt-to-income measures discussed above, such as suppression of all information on the distribution of assets and debts among households.

D. Discretionary Spending

There are several other aggregate indicators of personal finances which can be used to evaluate the probable course of consumer spending. Among these are measures of nondiscretionary spending relative to income, and nondiscretionary spending plus debt repayments relative to income, presented in Exhibit 7. From a lengthy historical perspective, it is clear that consumers have gradually improved their living standards by being able to to spend less on "essentials," leaving more for discretionary spending or saving, as the top panel shows. In the more recent period, however, there has been little further net improvement in the consumer's discretionary income situation. Inclusion of debt repayments as a nondiscretionary outlay has pushed the ratio upward since 1975; nevertheless, debt payments do not seem to have made the sort of inroads into discretionary uses of income that would be expected of a population that was too heavily burdened by debt.

E. Delinquency Experience

Another relevant type of aggregate data includes direct measures of payment difficulties, such as mortgage and consumer loan delinquency rates, some of which are shown in Exhibit 8. On balance, these figures provide little indication of a worsening debt burden problem during the 1977-78 period of rapid debt growth. Mortgage delinquencies at savings and loan associations, in fact, were apparently at a 5-year low as recently as the fourth quarter of 1979. Only the series on bank-card delinquencies rose significantly within the 1977-78 period. Consumer loan delinquencies increased during the second half of 1979, but remained measurably below earlier highs.

II. HOUSEHOLD SURVEY DATA

This section presents some findings of research on debt burden using financial data for individual households collected in the three surveys: University of Michigan's 1970 Survey of Consumer Finances, the Federal Reserve sponsored 1977 Consumer Credit Survey, and a reinterview of part of the 1977 panel.

A. Major Questions

Several questions regarding household debt use, which are principally or exclusively answerable with microdata, are dealt with here. In broad terms, the focus of these questions is whether the strong expansion of consumer credit in 1977-79, and the associated rise of the aggregate debt-to-income ratios to new highs, warranted serious concern or could be viewed with equanimity. Specifically:

1. Do the aggregate borrowing figures mask important shifts in the distribution of debt among households? For instance, did debt become more--or less--concentrated in recent years? Was a greater or lesser proportion of debt owed by lower-income families than before?

2. Were there changes in the makeup of the population that provided a "benign" explanation for the increasing aggregate debt ratios? For instance, might a greater proportion of households in the family formation stage of the life cycle have accounted for higher overall debt use, without implying abuse of credit?

3. Given the concern that higher aggregate debt burden might have lead to a curtailment of consumer spending, is there any evidence from the microdata that high debt relative to income tends to discourage consumption?

B. Distribution of Debt

In both 1970 and 1977, the proportion of households in debt was a generally increasing function of gross family income, while the ratios of debt outstanding or repaid per year relative to income were inversely related to income levels.

For consumer installment debt, the overall proportion of surveyed households in debt rose slightly between 1970 and 1977. The greatest increases occurred within the highest and lowest income quintiles. The largest gains in the average ratios of debt to income occurred in the low-income category. Nevertheless, as Exhibit 11 shows, the lowest income group experienced only a slight rise in its still small share of outstanding installment debt (4.4 percent in 1977 from 3.8 percent in 1970). The highest income quintile accounted for a sharply higher share of outstanding installment debt in 1977 (37 percent vs. 25 percent in the 1970 survey). Each middle-income group accounted for smaller shares in 1977 than in 1970.

Findings for mortgage debt roughly parallel those for installment debt. However, the overall proportion of households in debt advanced more strongly for mortgage than for installment debt, and the increases were spread more evenly among income groups.

1. Installment Debt Use by Income Class. Exhibit 9 presents data on the proportion of families with consumer installment debt (excluding credit card debt) for each of five income groups, as well as average debt-to-income ratios for the debtor subgroup within each income class. To facilitate comparison between 1970 and 1977, respondents for each year were grouped into approximate income quintiles. In this way, the top one-fifth of the income distribution for the two years could be compared, regardless of what specific dollar boundaries would be dictated for the income classes.[6]

a. Proportion in Debt. The proportion of low-income families with installment debt rose considerably between the two surveys--from 23 percent to almost 31 percent--although the in-debt proportion was still considerably below that for any other income class. The proportions in debt increased only moderately (or fell slightly) from the 1970 figure in the next three higher income groups, then rose sharply--from 47 to 58 percent--for the highest income quintile. In the 1977 survey, the proportion was greatest (66 percent) in the next-to-highest income group, but the disparity from other income groups had narrowed considerably from the 1970 distribution.

Reasons for the larger gains in debt use among the highest and lowest income households are subject to debate. For high-income groups, supply constraint is presumably a negligible factor in determining debt use. Such demand-related factors as inflation, which encourages advance buying of durable goods and permits repayment in "cheaper dollars," could stimulate higher income families to use credit more intensively. The relative stability of consumer finance rates in the face of rapid inflation reduces the real cost of credit, which encourages borrowing. More favorable tax treatment of interest costs as inflation promotes families into higher nominal income brackets adds to the inducement to borrow.

For the lower income groups, some relaxation of supply constraint may have taken place between 1970 and 1977, as lenders have competed more vigorously for consumer business. Some of the difference (for both income groups) might also be attributed to the fact that the 1970 Survey occurred during a recession while the 1977 Survey came in the midst of a strong economic expansion. Possible changes in demographic characteristics within income groups may also have affected the proportions of respondents in debt. Some of these factors are examined for the low-income group in a later section of this paper.

b. Debt/Income Ratios. Among families with some installment debt, low income debtors have experienced the greatest increase from 1970 in debt outstanding or repaid relative to their gross family income.[7] In 1977, outstanding installment debt for the lowest income quintile equalled 30 percent of gross family income on average, up from 22 percent in 1970. Other income groups experienced smaller increases from 1970, a result perhaps partly explained by their more ready access to bank and other credit card accounts, as illustrated in Exhibit 10. Credit card debt, as mentioned, is not included in the debt totals underlying the measures in Exhibit 9.

The ratio of scheduled repayments to family income rose significantly for the lowest income group between 1970 and 1977, but was little changed for other income groups, and even declined for the highest income class. The generally smaller increases in the repayments ratio compared with the outstandings ratio, particularly for the higher income groups, no doubt reflect the lengthening of maturities on consumer loans in recent years. Longer maturities may be most widely available for persons in higher income brackets likely to be considered good credit risks.

Exhibit 11 shows the proportion of total installment debt covered in the survey attributable to each income group. The columns on the far right adjust for the slightly unequal distribution of respondents into the five approximated quintiles. The low-income group accounted for a relatively small share of total debt, despite the higher average outstanding-debt-to-income ratio for low-income families with debt observed in Exhibit 9. The small share of total debt attributable to low-income families reflected their comparatively lower level of consumption expenditure and lower average propensity to be in debt at all. Compared with 1970, the highest-income group experienced the greatest expansion in share of total installment debt, rising 12 percentage points to a 37 percent share. The share for low-income families also increased, but remained at less than 5 percent of the total.

2. Mortgage Debt Use by Income Class. Exhibit 12 presents data for home mortgage debt analagous to the consumer installment debt figures of Exhibit 9. As generally true with installment debt, the proportion of families with mortgage debt was higher for higher income classes, while the ratios of debt to income were lower the higher the income class. All income groups showed an increase in the proportion with mortgage debt between 1970 and 1977, but unlike the installment debt situation, the increase for the lower income group was not out of line with increases in other groups. However, the low income group did show substantial gains in the average ratios of outstanding mortgage debt and mortgage payments relative to family income. Increases in debt relative to income were much smaller (and sometimes negative) for each of the other income classes. On average, in the 1977 survey, low income families had total mortgage obligations of about 3-1/2 times the size of their annual incomes, while scheduled monthly payments of interest and principal took 49 percent of their income each month, up from 31 percent in 1970.

It appears from Exhibits 9 and 12 that the proportion of mortgage debtors in the population has grown faster than the proportion of installment debtors between 1970 and 1977, whether all survey respondents are considered or just those for whom income was known. For the full sample, the proportion of mortgage debtors rose from 36 to 40 percent, while the proportion of installment borrowers was virtually unchanged, rising only from 49 to 50 percent. For the subsample with known incomes, the increase in mortgage borrowers was from 36 to 42 percent, and for installment borrowers, 49 to 53 percent.

3. Total Mortgage Plus Installment Debt by Income Class. Exhibit 13 presents statistics of debt use for mortgage and installment debt combined. This table necessarily portrays patterns similar to those in Exhibits 9 and 12. Approximately two-thirds of all families in the 1977 Survey had at least one of the two broad types of debt under consideration, a moderately higher percentage than in 1970. It might be noted that the average debt-to-income ratios for the low-income group were smaller for total debt than for mortgage debt alone. This, of course, reflects inclusion in the total debt figure of many families which had installment debt but no mortgage.

C. Demographic Influences on Household Borrowing.

Analysts have pointed to several demographic developments as likely contributors to the strength of consumer credit growth. Some of these influences would generally be regarded as benign, and serve to lessen concern over the possible extent of "overborrowing." For instance, a shift in population mix toward a greater proportion of persons in the "family formation" years might imply a normal and defensible increase in aggregate debt relative to aggregate income. However, as discussed below, such a change in population characteristics seems to have had little appreciable effect on aggregate debt use.

1. Population Shifts. The impact of changing age structure of the population on household indebtedness is examined in Exhibit 14, using Census Bureau population statistics for 1970 and 1977, and data on household borrowing by age group from the 1977 Survey. According to the table, the

changes in age structure have probably had little net effect on the proportion of households in debt or on the mean amount of debt outstanding. In 1977, there was a greater proportion of families than in 1970 headed by a person aged 25 to 34 years old, which was also the age group with the highest propensity to be in debt (67.5 percent of such families). Families headed by persons under 25 also increased between 1970 and 1977, according to Census Bureau statistics. However, increases in these two age groups were partially offset by declines in the proportion of families headed by persons aged 35 to 54, and these families were also relatively heavy debt users. Moreover, they borrowed larger average amounts than the youngest family group, as indicated in column 5, which shows the mean debt outstanding for all families (including non-debtors) in each age category. On balance, the age shifts have simply not been striking enough, nor the differences in debt propensities large enough among the crucial age groups, to have much impact on aggregate debt measures.

The last 4 columns of Exhibit 14 show the derivation of comparative in-debt proportions and average debt amount for all families, when such measures are held constant for each age group (at 1977 values) and weighted alternatively by the 1970 and 1977 population distributions. For the proportion in debt, the direction of impact is positive, but quite small, as shown on the "all age group" line under columns 6 and 7. Given 1977 propensities to be in debt, the 1970 overall in-debt proportion would have been 49.5 percent and the 1977 proportion 49.7 percent. When amounts of debt are considered in columns 8 and 9, the age shift implies a slight drop in aggregate indebtedness, from $1258 to $1246 per family, reflecting the generally smaller size of debt balances for the youngest families compared to the middle-aged groups.

2. Debt Use Within the Low-Income Group. Since the in-debt proportion and debt-to-income ratios had risen sharply for low-income households between 1970 and 1977, this group was singled out for more intensive study of demographic influences on debt use. Objectives were to determine whether debt increases might be concentrated in specific subgroups of low-income families, and whether changes in demographic characteristic of the low-income group might be associated with increasing debt use. Preliminary results suggest that differing composition by sex or marital status of family head have had little effect on borrowing patterns for the group. Education level also appears to have had little bearing on low-income family borrowing, while number of dependents appears to have contributed marginally to overall higher debt use. Households with minor dependents were somewhat more likely to be in debt than other households, and the proportion of low-income households with minor dependents was higher in 1977 than in 1970. Also, while low-income households were more apt to be in debt in 1977, regardless of whether they had minor dependents or not, the debt-to-income ratios increased markedly only for those with dependents.

One noteworthy difference between 1970 and 1977 was a sharp increase in the number of low-income households surveyed having substantial assets. An important source of the larger asset holdings was home values. Financial asset distributions were not greatly different between the two years, although there was a significantly higher proportion of low-income households with non-zero financial assets in 1977. Exhibits 15 and 16 present in-debt proportions and installment credit repayment-to-income ratios for the low-income quintile according to asset holdings for both 1970 and 1977. The proportion of low-income households belonging to each asset group is also shown in

Exhibit 15. As can be seen, the proportion of the low-income households in the three highest asset categories increased sharply between Survey periods and the proportion with no reported assets declined markedly. In both years, the proportion in debt generally was smaller in the higher asset categories, but the pattern was less pronounced in 1977. As a result, households in the higher asset categories were much more likely to be in debt in 1977 than in 1970. Repayment-to-income ratios were higher in 1977 for all but one asset category of the low-income quintile, but differences appeared to be greatest in the high-asset categories.[8]

On balance, it appears that greater asset holdings in 1977 were significantly associated with the higher borrowing propensities observed for lower income households in that year. There were more low-income families who owned substantial assets and such families were additionally more inclined to be in debt and for larger amounts relative to income, than their 1970 counterparts.

D. Purchase Activity Between Surveys.

A question of broad current interest concerns the extent to which consumer expenditure decisions may be affected by large debt obligations. Should a large buildup of debt be expected to induce a marked slowdown in consumer spending? In Part I, the macroeconomic evidence was seen to be not fully conclusive. This section seeks to provide some microeconomic insights by examining the incidence of major consumption expenditures made by reinterviewed respondents during the approximate one-year period between surveys in 1977 and 1978. A major objective was to determine the extent to which the debt burden of households at the beginning of a period affected subsequent purchases of major consumer durables (here including expenditures on home improvement services).

To measure the influence of debt burden on major expenditures of individuals, a function was estimated in which the occurrence of one or more major expenditures (during the period between surveys) was dependent upon such "life cycle" characteristics as age of household head and number of dependents, along with income, asset holdings, and attitudinal variables, such as perception of price increases, that might influence buying decisions. The role of "debt burden" was represented by a ratio relating a household's beginning-of-period scheduled installment debt repayments to its gross (pre-tax) family income. If the hypothesis is correct that, other things equal, higher levels of debt discourage expenditures by imposing a sizable alternative claim on income, then the debt burden measure should be negatively associated with incidents of major purchases, once the influence of other determinants have been properly accounted for.

The primary analysis was carried out using multiple classification analysis (MCA), an adaptation of ordinary least squares regression for use with dummy variables, which was developed in the early 1960s at the University of Michigan. Unlike many simpler multivariate methods, which require linear or other restricted relationships among variables, MCA can handle relationships of various forms among predictors or between a predictor and the dependent variable, and can accept predictors with nominal measurement (such as race or marital status) as well as numerical data. Subcategories of predictor variables are transformed into dichotomous "0-1" dummy variables and related to a dependent variable which may also be dichotomous or measured on an interval scale. Coefficients of predictors in MCA are expressed as adjustments to the overall mean of the dependent variable, not deviations from the single class which must be excluded from each set when dummy variables are used.

The principal output of an MCA program includes the overall full-sample mean of the dependent variable (between 0 and 1 where a dichotomous dependent variable is used), along with the subsidiary means of the dependent variable calculated for each subcategory of the predictors. Also printed is an R^2 statistic, analogous to the R^2 of ordinary least squares regression, a measure of the joint explanatory power of the predictors. A statistic labeled b specifies the relative importance of each predictor's contribution to movement in the dependent variable with all other predictors held constant. It measures the number of standard deviation units the dependent variable moves when the explanatory variable changes by one standard deviation.[9]

In the present study, 1978 reinterview data on major expenditures made between surveys was formed into a variable indicating "no purchase" or "some purchases" (one or more).[10] This variable was given the values "0" or "1" and correlated with selected economic, demographic and attitudinal variables, as indicated above. A beginning-of-period ratio of scheduled installment debt repayments divided by family income was calculated from data in the original 1977 survey, and was used as one of the several predictors.

Exhibit 17 presents the "mean purchase frequency"--the proportion of respondents who made one or more major purchase--for each subcategory of each predictor, both unadjusted and adjusted for the effects of the other predictors. The "grand mean" on the top line of Exhibit 17 indicates that approximately 50 per cent of the reinterviewed households had made one major purchase or more since the original interview a year earlier.

1. Impact of Repayments Burden. The ratio of debt-repayments-to family-income predictor was subcategorized into those households which had debt repayment ratios of 10 percent or less, 11 to 20 percent, greater than 20 percent, or which had no debt at all. The results from the MCA analysis indicate that the category of respondents having the highest initial ratios of installment debt repayments to family income also exhibited a somewhat greater tendency to make a major purchase in subsequent months than those with no initial debt or a low repayment ratio. This pattern was moderated when adjustment was made for intercorrelation among the predictor variables, but the positive relationship between the repayments ratio and a subsequent major expenditure remained.

The results for the debt burden variable are shown in the first bank of data in Exhibit 17. The calculations show that, before adjusting for the simultaneous impact of other predictors, roughly 41 percent of the nondebtors made a major purchase, compared with nearly 60 percent for those with the heaviest repayment load relative to income.

The moderating influence of the other predictors is reflected in the "adjusted" purchase frequency column. For instance, for nondebtors, the frequency of purchase is recalculated to 49 percent when the influence of the other nine predictors is screened out, compared with the unadjusted figure of 41 percent. Adjustment worked in the opposite direction for households most heavily in debt. The proportion of households making a purchase while facing heavy repayments dropped to approximately 55 percent after adjustment, from 60 percent unadjusted. Nevertheless, only for households heavily in debt did the adjusted proportion of respondents making a purchase appear significantly above the overall average. This result thus runs directly contrary to the hypothesis that, other things equal, a high debt obligation relative to income discourages spending.

The positive correlation between debt position and large purchases, it should be noted, was a relatively weak one, as indicated in Exhibit 18. This exhibit presents for each variable the rank order of the β-statistics, which indicates the relative importance of each predictor in explaining the dependent variable, with all other predictors held constant. For the repayments-to-income ratio, the low value of β (.027) and low rank (9th of 10) indicates that this measure was simply a poor predictor of future expenditures on major items, at least in the economic environment in the period prevailing between surveys. The predictor "age of family head" possessed the greatest ability to explain variation in the dependent variable, after adjusting for the effects of all other predictors. Other important predictors, discussed below, turned out to be the number of minor dependents in the household and the household's income bracket.

2. The Impact of Other Predictors. The demographic variables "age of household head" and "number of minor dependents" exerted a strong influence on major consumer expenditures. The income quintile to which the family belonged was also an important determinant, while household asset holdings (including value of real property) ranked last in explanatory power, slightly below the debt burden measure.

The pattern of estimated values for the dependent variable appears quite reasonable for the categories of age and income. Households headed by younger individuals--typically those in the "family formation" stage of the life cycle--exhibited the highest incidence of major purchase, while households with older heads were less likely to make a major purchase. By income level, purchase of an auto or major durable occurred least frequently within the low-income group, and increased with each successively higher income class. This pattern was particularly pronounced in the unadjusted relationship; allowance for other predictors substantially moderated the apparent strength of the income-expenditure linkage.

As shown in Exhibit 17, the presence of several minor dependents in the household (3 or more) tended to be associated with a low incidence of "big-ticket" purchases, once the influence of other variables was accounted for. This relationship might reflect higher than average commitment of income to spending on food and clothing in such households; or perhaps families with 3 or more dependents often have already amassed most of the household capital goods that dominate the "major expenditure" category. The highest (adjusted) incidence of major purchase was among 1-dependent households, but purchase propensities for the 0- and 2-dependent categories were not much different.

The "age of auto" variables were included in the MCA analysis to represent the "need" to buy an auto. For instance, a household which already owned a car of recent model-year would presumably feel less compelled to purchase a car during the period covered in the reinterview than would a household with an older car. Since ownership of a relatively new car would probably relate positively to debt repayments, leaving age-of-auto variables out of the list of predictors might have obscured the influence of the debt burden measure. In fact, however, the adjusted mean purchase frequencies for the debt burden categories were little affected by the presence of the car age variables, although the car age variables themselves were modestly related to major purchases.[11]

Variables reflecting consumer perceptions of their personal financial situation (better off/worse off) and their perceptions of the rate of price increases ranked relatively low in explanatory power. On an unadjusted basis, the group that felt better off financially had an above-average rate of major purchase, while the "worse off" group was below average in purchase frequency. Adjustment for the influence of other predictors reversed this pattern, however, suggesting that perception of financial status added little to what could be inferred from the more objective variables. No particularly clear pattern of expenditure frequency emerged for the price perception variable: respondents with extreme views of price changes--whether too low or too high--appeared to belong to households with lower rates of purchase, but this result was fairly irregular.

3. Alternative MCA tests. The finding that the size of scheduled debt repayments relative to income has little effect on subsequent expenditures is still subject to question on at least two general bases. It may be argued that an unresolved simultaneity problem biases the measured relationship between debt burden and instances of major expenditure. It may also be posited that the particular measure of debt repayment burden and/or expenditure was inappropriate--that outstanding debt should have been used, that other forms of household debt should have been included, or that dollar amounts of expenditure rather than instances of spending should have been studied. These broad issues are commented upon below.

a. Simultaneity problem. As discussed earlier, the "life cycle" variables of age, family size, and so forth, were found to be important determinants of major expenditure. Of course, insofar as major expenditures are frequently financed by consumer installment debt, the life cycle variables are also strongly associated with debt payments. Moreover, since the life cycle characteristics of a household change only gradually over time, households engaging in major purchases in one period have a relatively high likelihood of making a major purchase during the following year. Thus debt at a given point can be expected to correlate with major purchases in the period to follow if only because both initial debt and later expenditures are reacting to essentially the same life cycle variables. As discussed earlier, the MCA test to explain major purchases included several current period life cycle predictors, but this specification may not have been adequate to neutralize the simultaneous relationship of the life cycle variables with the dependent variable and debt burden predictor. It left unaddressed the problem of correlation between the debt variable and the error term.

An alternative, two-stage, estimation procedure was employed to deal with the simultaneity problem. In the first stage, debt formation was explained by an equation that contained income class and various demographic and life cycle variables. This provided a predicted or explained portion of debt and a residual unexplained portion of debt. That portion of debt accounted for by the first-stage equation might be expected to relate positively with subsequent expenditures owing to the simultaneous relationship with life cycle characteristics. The unexplained elements of debt might then be more likely to reveal whatever damping effect high debt in itself might exert on decisions to make major purchases.

The second stage of the process was to reestimate the original equation for purchase activity, with one modification. The predicted and residual repayments-to-income variables, categorized into approximate quintiles, replaced the observed original value of that ratio. In the new equation, the variable for predicted debt-to-income ratio ranked third in β-value, while the residual (unexplained) aspect of debt burden ranked next to last. The quintile representing the highest predicted debt burden was associated with a considerably higher-than-average rate of purchase, but no uniform pattern pertained among the quintiles. The fourth quintile--those with above average predicted debt-to-income ratios--had a relatively low incidence of major purchase. Neither was any pattern apparent in the coefficients of the residual debt burden quintiles. The fifth quintile (representing households with the largest positive deviation from predicted debt burden) was somewhat above average in purchase activity, but so was the second quintile of households. The other three quintiles were slightly below average in incidence of major purchase. On balance the results offered little evidence that debt burdens higher than explicable by stage of life cycle would deter major expenditures.

The basic equation was reestimated with the predicted and residual debt burden variables appearing separately rather than together. Each performed alone about as it had when both variables were used in the equation.

b. Other forms of variables. Analyses of several variants of the debt-income variable and alternative models are summarized below. These variants were tested only in the single-equation MCA model, not in the two-stage alternative.

In the original model, debt repayments were confined to closed-end installment debt. Revolving credit and mortgage debt were both excluded from the calculation. Data on revolving credit repayments were not available from the 1977 survey, although respondents did provide an estimate of the total inome owed on credit card accounts. In one alternative MCA test the estimated amount of total credit card debt owed was included as a separate explanatory variable. It ranked relatively high among the predictors of expenditures in the following 12 months. Households with no credit cards exhibited the highest frequency of purchase, and those with credit cards but with no outstanding card debt were slightly above average in purchases. For households with some card debt outstanding, those with large balances averaged a greater tendency to purchase than those with smaller balances. The estimated purchase frequencies calculated for subcategories of the installment debt repayments-to-income variable were largely unaffected by the presence of the card debt variable.

A separate test was also made in which mortgage debt repayments were added to installment debt repayments to form a new repayments-to-income ratio. This formulation tended to accentuate the positve relationship between debt obligations and major purchase activity, but only marginally, and the variable again ranked quite low in β-value.

Outstanding installment debt relative to income was substituted for the repayments ratio in another version. The previously observed greater likelihood of the heavily indebted households to make major purchases (compared to nondebtors) was even more pronounced when outstanding debt was considered. The β-rank of the debt-to-income predictor improved somewhat when outstandings were substituted for repayments in constructing the variable.

For most respondents, dollar amounts of purchase were ascertained in the reinterview survey. It was possible, therefore, to substitute amount of expenditures for the "purchase-no purchase" dependent variable. In this case, mean values of the dependent variable for each subcategory of predictor represented the average amount spent on major purchases by households within the subcategory. The overall explantory power of this alternative equation was relatively low, and the debt-repayments-to-income ratio remained a low ranking predictor. The pattern of relationship was somewhat different, however, in that dollar amounts of purchase for households with no initial installment debt were on average larger than the overall mean. On the other hand, for those with some debt, the amount of average expenditure increased as the size of debt burden increased.[12]

Finally, households which had made more than one major purchase were studied in comparison to single purchasers and nonpurchasers combined. There were some shifts in importance among the predictors. A recent change of residence, for example, turned out to be strongly associated with "multiple-purchase" households. The results for debt repayments-to-income, however, were virtually unchanged from the basic MCA results presented in Exhibit 17.

As regards the focal issue of the MCA analysis--the impact of debt burden on subsequent spending--none of the alternative tests gave much support to the notion that heavy debt deters spending.

FOOTNOTES

1. The August 1977 survey was cosponsored by the Federal Reserve Board, the Comptroller of the Currency and the Federal Deposit Insurance Corporation. Basic results of the survey are presented in the Federal Reserve's *1977 Consumer Credit Survey*, authored by Thomas A. Durkin and Gregory C. Elliehausen. Part of the 1977 panel was reinterviewed in August 1978 in connection with the Survey Research Center's regular quarterly survey on consumer attitudes.

2. One rule of thumb was that whenever the annual rate of credit expansion went above 2 percent of disposable income, a curtailment of spending was imminent. During the upswing following the 1973-75 recession, this particular ratio first crossed 2 percent in the fourth quarter of 1976, yet no significant slowdown in consumer spending emerged for at least the next eight quarters.

3. By stretching out the period of repayment, repayments in a particular month per dollar loaned are smaller. With smaller repayments, the net flow of credit becomes larger relative to any given volume of extensions. The larger is the net flow relative to the gross extensions flow, the smaller will be the impact that a given percentage change in extensions has on percentage change in net flow. Hence the growth rate of outstandings becomes less responsive to changes in extensions as maturities lengthen.

4. For a discussion of the extent of this activity see, David F. Seiders, *Working Paper No. 25: Junior Mortgage Financing and Other Borrowing Against Inflated Housing Equity*, Credit Research Center, Purdue University, 1976.

5. Perhaps the most rigorous econometric study of the role of debt in expenditure decisions has been that of Frederic Mishkin in a series of articles appearing in various journals around 1975-77. Mishkin's main premise was that because consumers are averse to being illiquid, debt buildup and concentration of assets in durable goods tends to discourage further spending and encourage saving. In his basic model, Mishkin included the outstanding level of consumer installment debt as an independent variable in equations to explain durable goods expenditure and total consumer spending. Estimating these equations in first difference form, Mishkin found that the debt variable did indeed take on the expected negative sign with statistical significance. One interesting finding was that the debt variable begins to stimulate spending fairly early in a recession. In the 1973-75 recession the rate of consumer credit growth slowed quickly and began to spur consumption by the second quarter of 1974. See, for example, Frederic S. Mishkin, "What Depressed the Consumer? The Household Balance Sheet and the 1973-75 Recession," *Brookings Papers on Economic Activity*, 1:1977, pp. 123-164.

6. Exact quintiles could not be created because only ranges of income--not specific dollar figures--were available from the 1977 Survey. The class limits were chosen to approach quintiles as closely as possible for 1977; because precise dollar-income estimates were available for 1970, groupings for that year could be established which would be precisely the same proportion of the income distribution as for the corresponding 1977 respondents. As an example, the five lowest income classes in the 1977 survey contained 20.6 percent of the respondents, forming an income "quintile" of $0-5,999. For 1970, exactly 20.6 percent of the respondents could be grouped together, with the upper class boundary equal to the highest income level within the group. This boundary happened to be $4,000.

FOOTNOTES (Continued)

7. Income here is gross family income rather than disposable personal income generally used in similar ratios calculated from economic aggregates. No adjustments were made for tax liabilities.

8. The small number of observations in 1970 for higher asset categories tempers this conclusion to some extent.

9. The β-statistic is equivalent to the standardized regression coefficient, i.e., the regression coefficient multiplied by the standard deviation of the predictor and divided by the standard deviation of the dependent variable.

10. Major expenditures include automobile purchases and a variety of other outlays principally for durable consumer goods.

11. Had only auto purchases been incorporated in the dependent variable, the relationship with age of auto would likely have been stronger than shown in Table 1. In any case, it appears that households owning 3-year old cars in the fall of 1977 were more likely to have made a major purchase of some type during the next 12 months.

12. Average amount of purchase for a given category of households includes the effect of those which made no purchases. Thus the higher average outlay for the high debt burden group partially reflects their previously discussed higher frequency of purchase.

EXHIBIT 1

CONSUMER INSTALLMENT CREDIT
ANNUAL AND QUARTERLY DATA, SELECTED YEARS

Period	Billions of dollars				Percent
	Seasonally adjusted annual rate (SAAR)			End of period	(SAAR)
	Extended	Liquidated	Net change	outstanding	Growth rate
1955	40.3	34.9	5.3	30.3	19.9
1960	50.8	47.0	3.8	45.0	9.2
1965	79.9	71.6	8.3	73.9	12.0
1970	115.0	110.4	4.6	105.5	4.5
1975	180.4	172.7	7.8	172.4	5.6
1976	211.0	189.4	21.6	194.0	11.9
1977	254.1	218.8	35.3	230.8	17.1
1978	298.6	253.5	45.1	275.6	18.3
1973-Q1	172.1	147.7	24.4	136.6	18.6
Q2	172.0	151.1	20.8	143.9	15.0
Q3	172.4	155.1	17.2	149.8	12.0
Q4	175.2	157.1	18.1	155.1	12.2
1974-Q1	171.4	161.0	10.3	153.2	6.8
Q2	177.5	163.1	14.4	157.6	9.3
Q3	176.8	164.7	12.1	163.5	7.6
Q4	163.9	164.3	-0.4	164.5	-0.2
1975-Q1	166.7	166.8	-0.0	160.0	-0.0
Q2	171.2	170.3	0.8	161.9	0.5
Q3	186.9	174.0	12.9	167.3	7.0
Q4	195.8	179.1	16.6	172.3	10.0
1976-Q1	202.6	184.5	18.0	171.6	10.7
Q2	204.2	183.6	20.6	179.1	11.9
Q3	211.0	190.2	20.8	186.7	11.6
Q4	221.8	197.1	24.6	193.9	13.4
1977-Q1	240.4	209.0	31.3	197.5	16.4
Q2	250.8	216.6	34.2	208.9	17.1
Q3	254.9	222.1	32.7	219.6	15.7
Q4	270.3	228.8	41.5	230.8	19.2
1978-Q1	274.6	237.1	37.5	233.8	16.4
Q2	301.4	251.0	50.3	249.8	21.2
Q3	304.9	261.8	43.1	263.3	17.3
Q4	313.0	266.6	46.4	275.6	17.8
1979-Q1	314.1	273.1	41.0	278.5	15.0
Q2	324.2	284.3	39.9	291.9	14.1
Q3	332.3	294.9	37.3	305.2	12.8
Q4	319.3	295.6	23.8	311.1	7.9

Amounts extended are new credit granted during the period. Amounts liquidated are primarily repayments on existing debt, but also include charge-offs, merchandise returns and other subtractions from balances owed. Net change is the difference between extensions and liquidations, that is, the net addition to the stock of debt outstanding.
Note: Figures include gasoline company credit card data after 1970.

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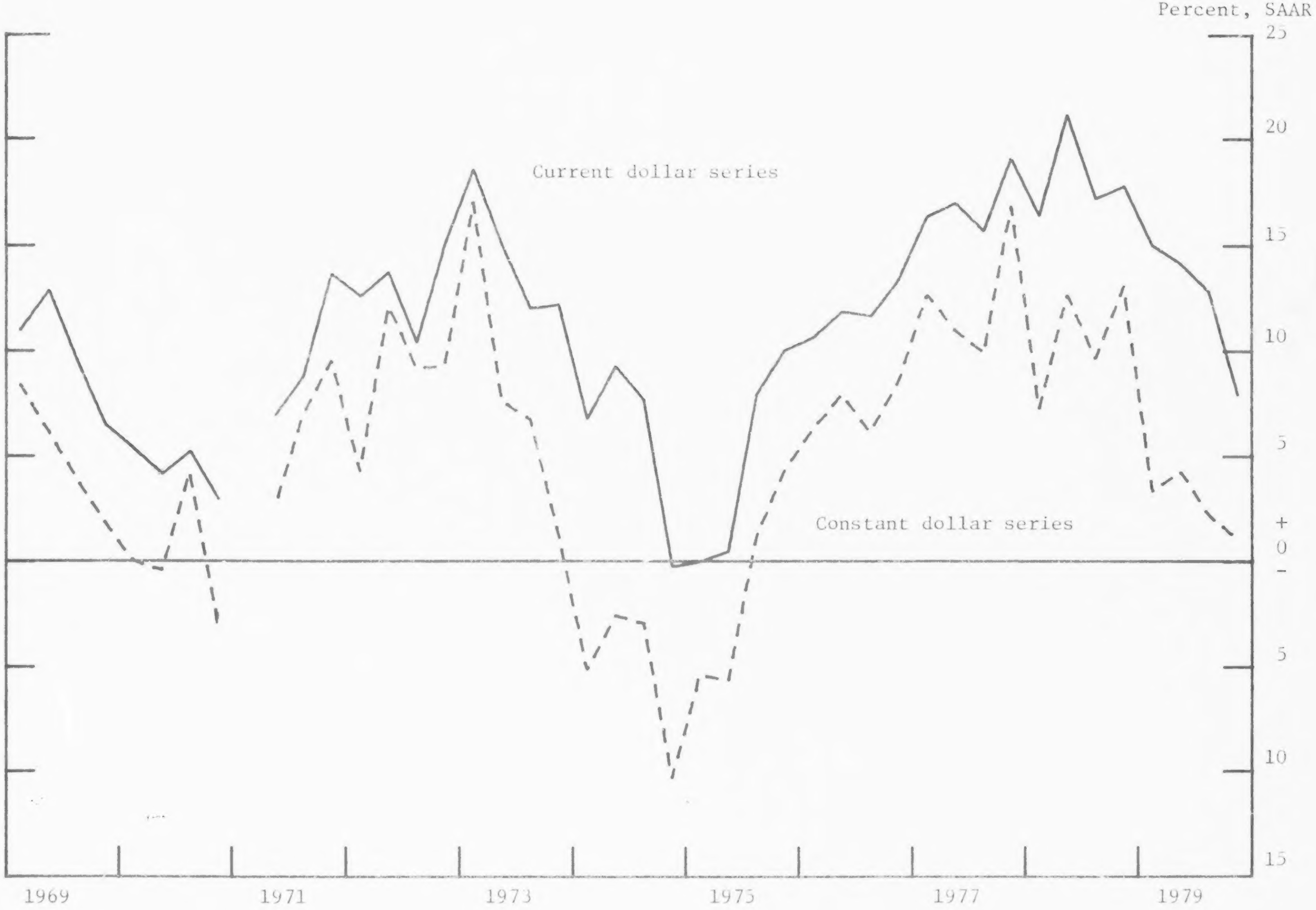
EXHIBIT 2

CONSUMER INSTALLMENT CREDIT GROWTH RATES



Break in series due to including gasoline companies after 1970. Constant dollar series reflects deflation by personal consumption expenditure deflator.

EXHIBIT 3

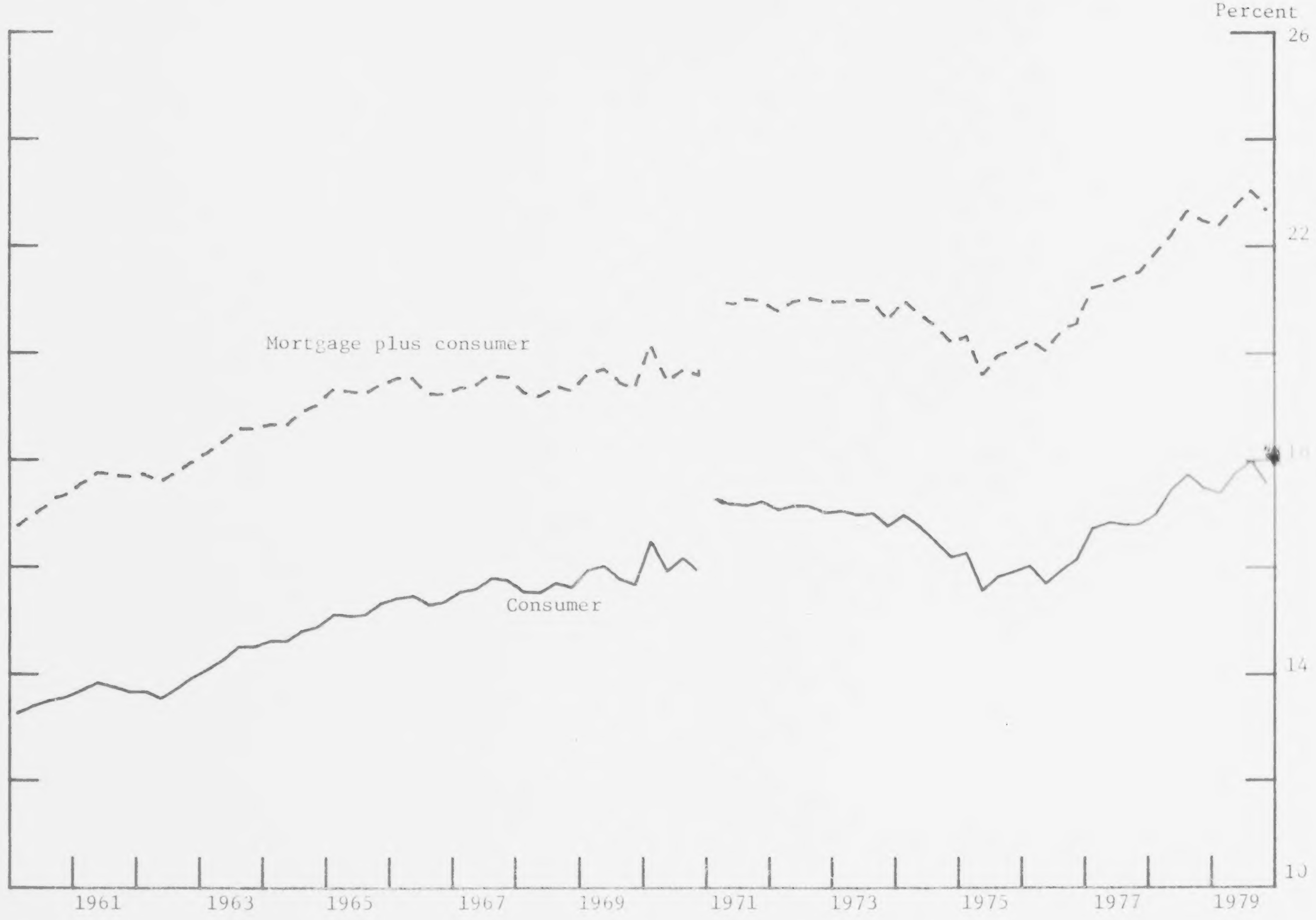
HOUSEHOLD DEBT REPAYMENTS AND RATIOS TO DISPOSABLE PERSONAL INCOME

Period	Repayments (billions of dollars)		Ratios to disposable income (percent)	
	Consumer installment	Total (incl. mortgage)	Consumer installment	Total (incl. mortgage)
1960	46.9	59.6	13.4	17.1
1965	71.6	91.2	15.2	19.3
1970	110.4	135.2	16.1	19.7
1975	172.6	216.9	15.9	20.0
1976	188.9	239.5	15.9	20.2
1977	219.2	278.3	16.8	21.4
1978	254.1	326.1	17.4	22.3
1979	287.0	367.7	17.7	22.7
1973-Q1	147.8	181.6	17.1	21.0
Q2	151.2	186.6	17.0	20.9
Q3	155.1	191.1	17.0	21.0
Q4	157.1	192.8	16.8	20.6
1974-Q1	161.1	199.1	17.0	21.0
Q2	163.1	201.2	16.8	20.7
Q3	164.7	204.6	16.5	20.5
Q4	164.4	204.8	16.2	20.2
1975-Q1	166.8	208.4	16.3	20.3
Q2	170.4	214.5	15.6	19.6
Q3	174.0	218.9	15.8	19.9
Q4	179.2	225.8	15.9	20.1
1976-Q1	184.6	232.3	16.0	20.2
Q2	183.6	232.9	15.7	19.9
Q3	190.2	242.6	15.9	20.3
Q4	197.2	250.1	16.1	20.5
1977-Q1	209.1	264.5	16.7	21.2
Q2	216.6	273.4	16.8	21.3
Q3	222.2	282.9	16.8	21.4
Q4	228.8	292.2	16.8	21.5
1978-Q1	237.2	304.3	17.0	21.8
Q2	251.0	318.5	17.5	22.2
Q3	261.8	333.9	17.7	22.6
Q4	266.5	342.2	17.5	22.4
1979-Q1	273.4	350.8	17.4	22.3
Q2	284.3	363.6	17.8	22.7
Q3	294.9	376.7	18.0	23.0
Q4	295.3	379.8	17.6	22.6

Note: After 1970 repayments series includes gasoline company credit card data. This caused a slight discontinuity in the ratios to income of approximately 0.8 percentage points between 1970 and later periods. Mortgage repayments, included with installment credit in total repayments, are staff estimates of scheduled payments of principal and interest (prepayments excluded).

EXHIBIT 4

HOUSEHOLD DEBT BURDEN
DEBT REPAYMENTS RELATIVE TO DISPOSABLE PERSONAL INCOME

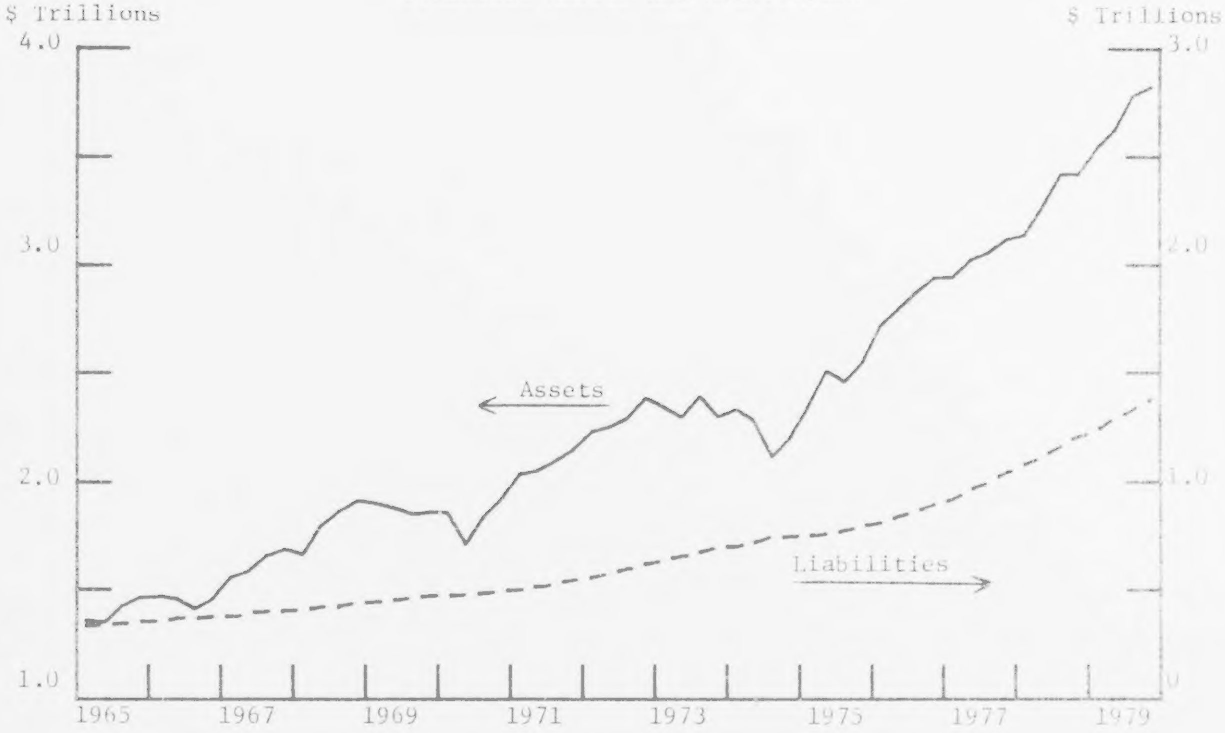


Break in series due to including gasoline companies after 1970.

EXHIBIT 5

HOUSEHOLD SECTOR FINANCIAL POSITION

Financial Assets and Liabilities



Financial Net Worth

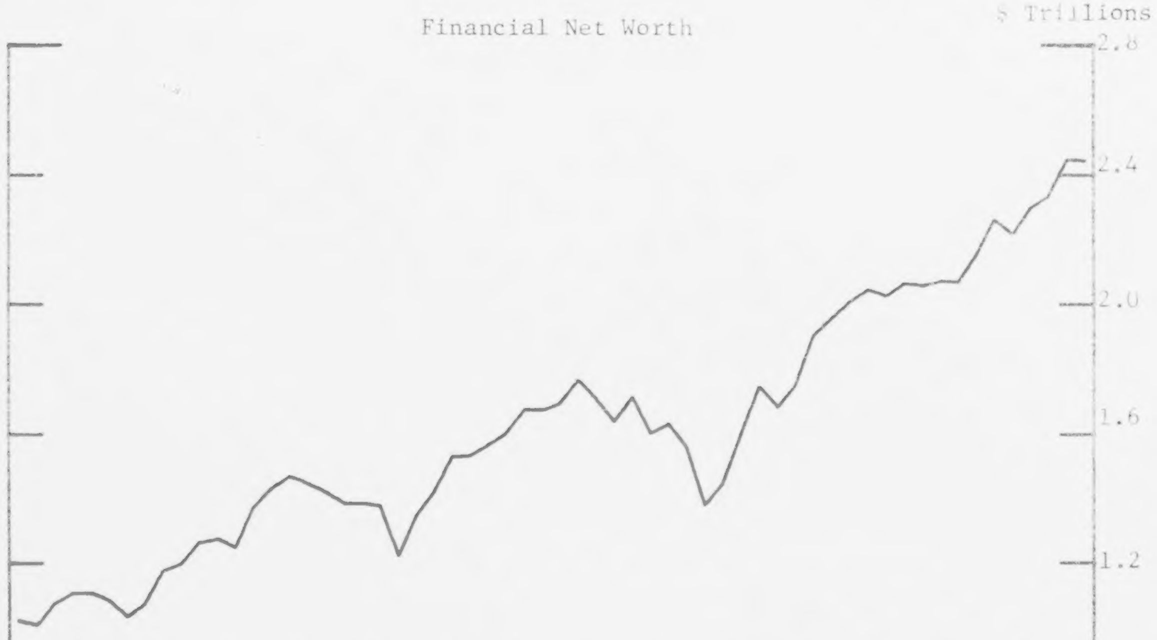
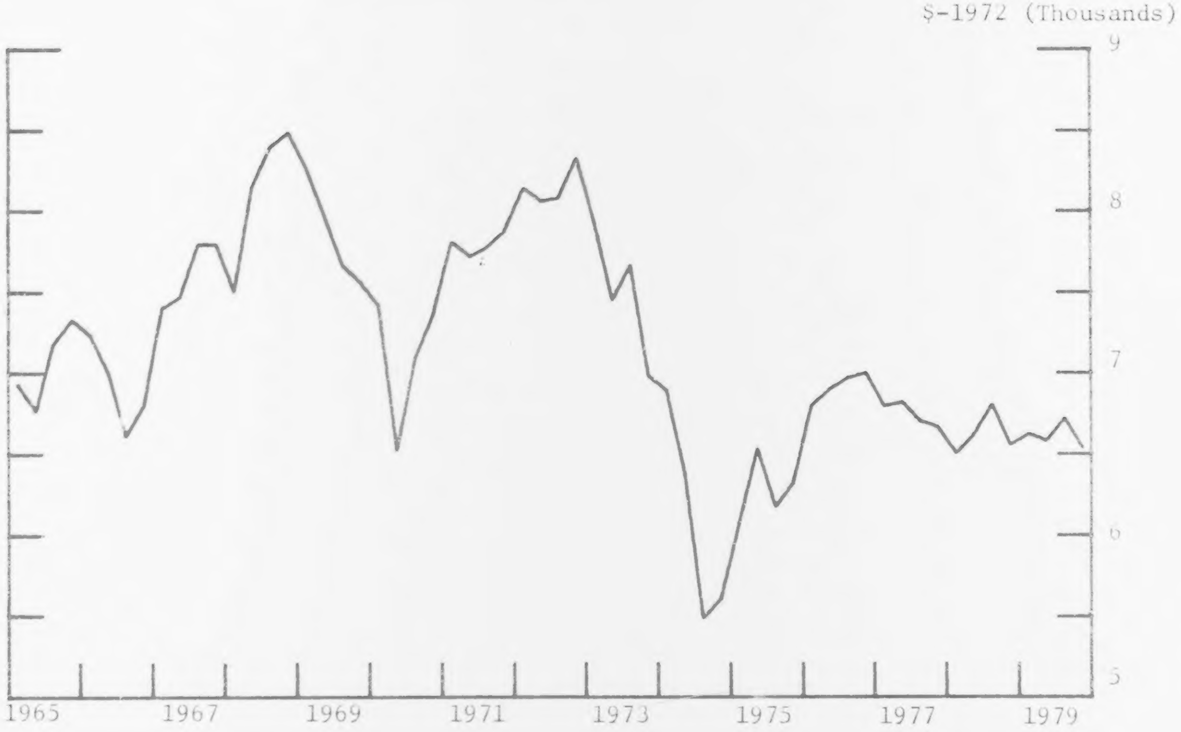


EXHIBIT 6

REAL FINANCIAL NET WORTH PER CAPITA



REAL TOTAL NET WORTH PER CAPITA

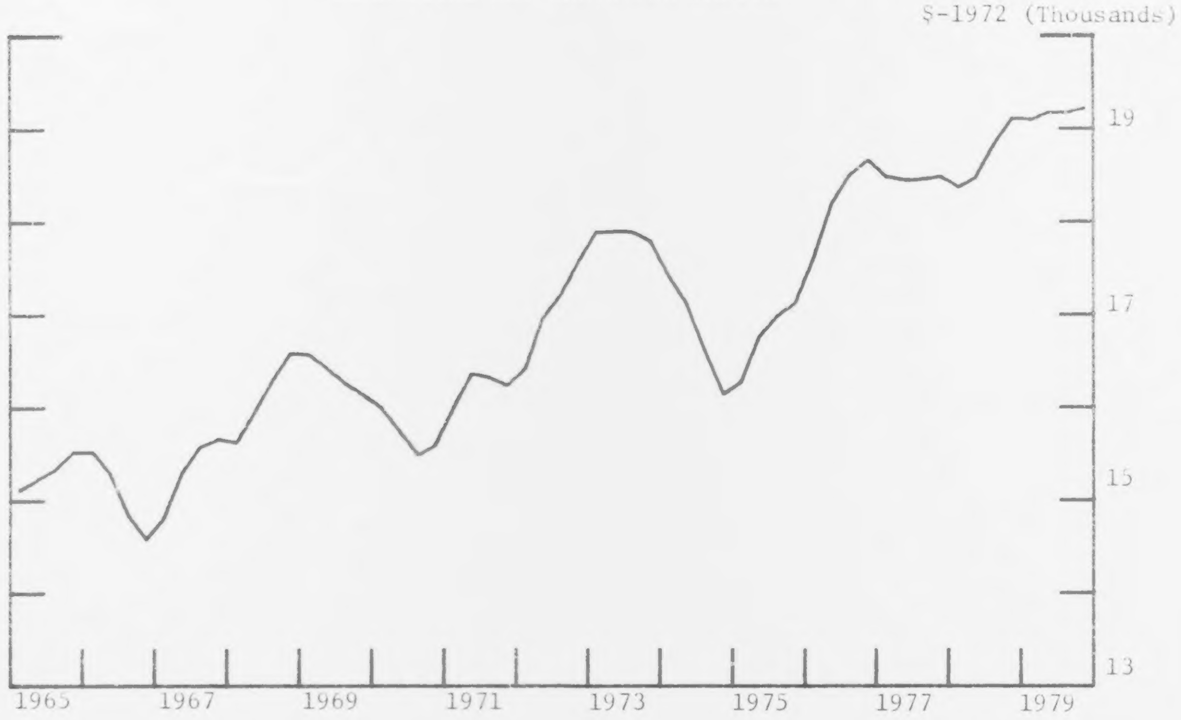
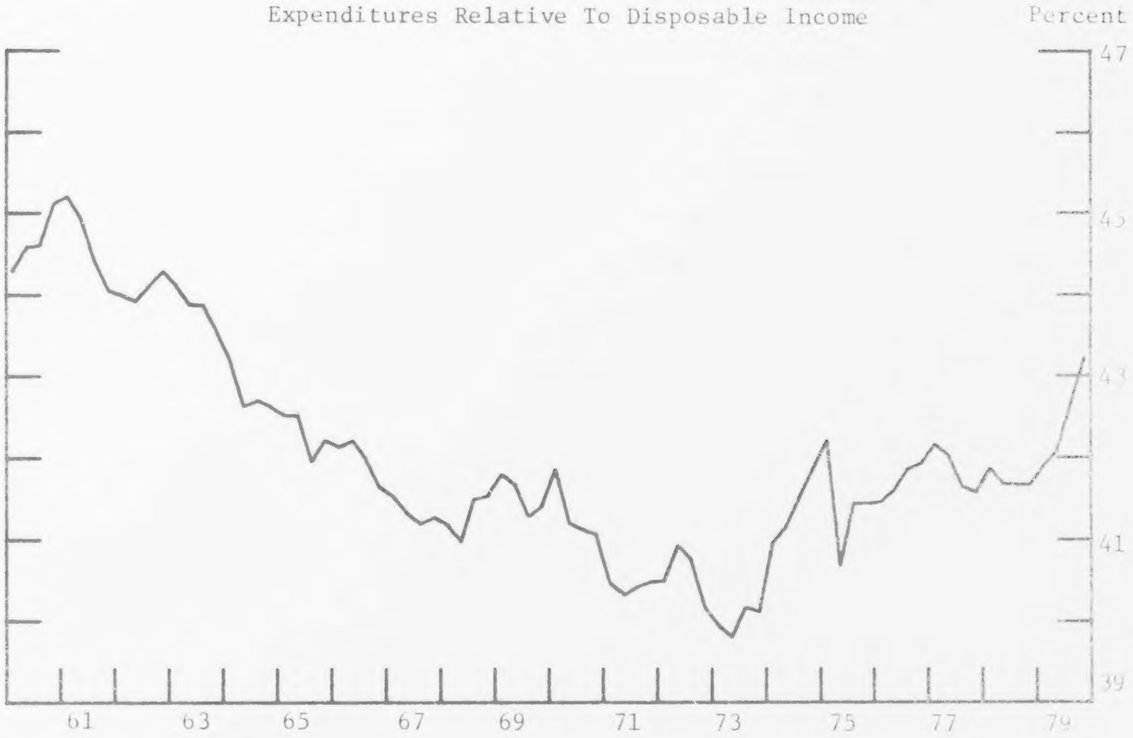


EXHIBIT 7

NONDISCRETIONARY HOUSEHOLD OUTLAYS



Nondiscretionary expenditure is an estimate based on Commerce Department data for outlays on food, fuel oil and coal, housing services and fractions of household operating costs, gasoline and oil, and "other" services. In the chart to the right, debt includes repayments on both mortgage and consumer installment debt.

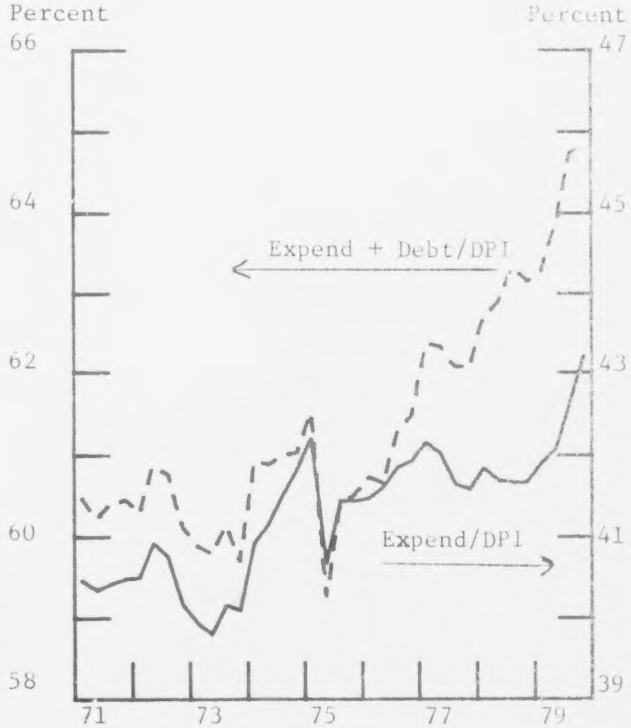


EXHIBIT 8

Consumer and Mortgage Loan Delinquency Rates
(Number Delinquent as Percent of Total Number Outstanding)
All Series Seasonally Adjusted

	Installment Loans 30 days or more delinquent			Mortgage Loans 60 days or more delinquent	
	Commercial Banks		Auto		
	Closed-end	Bank-card	Fin. Co.	MBA Series	S&Ls
1970	1.85	NA	2.46	0.84	n.a.
1971	1.78	NA	2.27	1.01	n.a.
1972	1.87	NA	2.11	1.04	n.a.
1973	2.07	NA	2.31	1.17	0.92
1974	2.64	2.58	2.61	1.20	1.07
1975	2.60	2.60	2.39	1.28	1.46
1976	2.39	2.26	2.01	1.32	1.43
1977	2.37	1.73	2.07	1.30	1.14
1978	2.41	2.15	2.23	1.28	0.96
1979	2.43	2.38	2.26	1.24	0.89
1976 - Q1	2.47	2.33	1.90	1.21	1.50
Q2	2.38	2.42	1.97	1.37	1.46
Q3	2.38	2.25	2.00	1.34	1.39
Q4	2.37	2.04	2.11	1.34	1.31
1977 - Q1	2.37	1.2	2.01	1.29	1.24
Q2	2.40	1.64	2.08	1.34	1.17
Q3	2.37	1.72	2.07	1.20	1.12
Q4	2.34	1.75	2.12	1.26	1.06
1978 - Q1	2.47	1.83	2.23	1.29	1.00
Q2	2.39	1.96	2.18	1.28	0.97
Q3	2.40	2.30	2.23	1.29	0.95
Q4	2.38	2.48	2.26	1.25	0.91
1979 - Q1	2.25	1.97	2.11	1.18	0.89
Q2	2.42	2.38	2.25	1.21	0.89
Q3	2.50	2.55	2.21	1.26	0.87
Q4	2.53	2.61	2.46	1.29	0.89

Sources: American Bankers Association, Federal Reserve Board, Mortgage Bankers Association, Federal Home Loan Bank Board.

EXHIBIT 9

PROPORTION OF HOUSEHOLDS[1] WITH INSTALLMENT DEBT AND DEBT/INCOME RATIOS

Approximate Income Quintiles			Percent Having Debt[2]		For Households with Installment Debt: Debt as a Percent of Gross Household Income (means of individual ratios[3])			
Dollar Amounts		Percent Distribution			Outstandings		Repayments	
1970	1977		1970	1977	1970	1977	1970	1977
0 - 4000	0 - 5999	20.6	22.9	30.7	21.8	29.9	18.7	24.5
4001 - 7300	6000 -10999	19.4	46.6	48.6	18.4	17.9	12.5	13.7
7301 -11076	11000 -17499	24.3	60.9	63.8	15.5	16.3	10.5	12.1
11077 -15350	17500 -25000	18.3	67.4	66.3	11.3	13.1	8.2	8.3
Over 15350	over 25000	17.3	47.2	58.3	9.6	10.6	6.7	6.0
All Households[1,3]		100.0	49.1	53.5	14.6	16.5	10.5	11.5

Sources: University of Michigan, 1970 Survey of Consumer Finances data tape;
Federal Reserve Board, 1977 Consumer Credit Survey tape.

1. "All Households" is defined as those households in the survey for whom the amount of income and amount of debt were available. In the 1970 survey, the University of Michigan estimated these magnitudes for households not reporting them. In the 1977 survey, missing income and debt amounts were not estimated. This resulted in dropping from 350-430 households (out of 2563) from the 1977 computations.

2. The proportion of survey respondents in debt is based on the 2225 households for whom income magnitudes were known. When all survey respondents are included, the 1977 proportion in debt is 50.2 percent instead of 53.5.

3. Individual debt to income ratios were computed, and the mean of these taken for each quintile and for all households. When debts are summed for all households with debt and divided by the sum of all incomes, the ratios are as follows:

	Outstandings		Repayments	
	1970	1977	1970	1977
Ratio to income:	13.6	15.0	10.3	9.4

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EXHIBIT 10

PERCENTAGES OF HOUSEHOLDS HOLDING CREDIT CARDS

Income Class (dollars)	Any [1] Card	Bank Card	Store Card
0-5,999	26.6	7.8	21.4
6,000 - 10,999	51.4	23.6	41.7
11,000 - 17,449	71.2	38.3	60.8
17,500 - 24,999	81.3	57.0	73.5
25,000 and Over	92.7	72.8	83.2
All Classes [2]	62.8	37.6	53.7

Source: 1977 Consumer Credit Survey.

[1] Includes gasoline credit cards, "travel and entertainment" cards and others not shown separately.

[2] Includes cases where income not ascertained.

EXHIBIT 11

SHARES OF TOTAL INSTALLMENT DEBT OUTSTANDING BY INCOME GROUP
1970 AND 1977 SURVEY DATA

Approximate income quintiles			Mean debt amount				Total debt		Percent share of debt		Adjusted share of debt[1]	
Dollar amounts		Percent distribution	Households in debt		All households							
1970	1977		1970	1977	1970	1977	1970 (000)	1977 (000)	1970	1977	1970	1977
0 - 4000	0 - 5999	20.6	595	1,141	137	315	72.6	138.1	3.9	4.6	3.8	4.4
4001 - 7300	6000 -10999	19.4	1,228	1,681	572	778	286.2	321.2	15.2	10.7	15.5	10.9
7301 -11076	11000 -17499	24.3	1,542	2,369	939	1,457	590.5	741.6	31.4	24.7	25.6	19.6
11077 -15350	17500 -25000	18.3	1,648	3,082	1,110	2,021	524.1	798.2	27.9	26.6	30.2	28.1
over 15350	over 25000	17.3	1,950	4,779	919	2,700	407.5	998.1	21.7	33.3	24.9	37.0
All families[1]		100.0	1,488	2,720	729	1,407	1,880.9	2,997.9	100.0	100.0	100.0	100.0

Sources: University of Michigan, 1970 Survey of Consumer Finances data tape; Federal Reserve Board 1977 Consumer Credit Survey tape.

1. The proportions of debt attributable to each income group are adjusted in these 2 columns to compensate for the deviation of the "quintile" size from 20 percent. Shares for each group were multiplied by 20/N, where N is the percent of respondents in the group. Adjusted shares were forced to total 100.0.

EXHIBIT 12

PROPORTION OF HOUSEHOLDS[1/] WITH HOME MORTGAGE DEBT AND DEBT/INCOME RATIOS

Approximate Income Quintiles			Percent Having Debt 2/		For Households with Mortgage Debt: Debt as a Percent of Gross Household Income (means of individual ratios)3/			
Dollar Amounts		Percent Distribution			Outstandings		Repayments 4/	
1970	1977		1970	1977	1970	1977	1970	1977
0 - 4000	0 - 5999	20.6	7.9	12.9	217.9	342.5	31.2	49.7
4001 - 7300	6000 -10999	19.4	19.6	27.1	109.9	127.9	15.4	18.7
7301 -11076	11000 -17499	24.3	39.4	53.1	94.3	105.6	11.9	14.2
11077 -15350	17500 -25000	18.3	58.1	63.9	85.5	84.1	10.5	11.3
over 15350	over 25000	17.3	60.7	70.5	61.7	62.3	8.1	8.3
All Households[1/3/]		100.0	36.1	42.3	89.5	103.7	11.6	14.4

Sources: University of Michigan, 1970 Survey of Consumer Finances data tape; Federal Reserve Board, 1977 Consumer Credit Survey tape.

1. See Table 1, fn 1.

2. See Table 1, fn 2. When all survey respondents are included in 1977 computations, the "all households" proportion in debt for that year is 40.4, instead of 42.3 per cent.

3. See Table 1, fn 3. When debts are summed for all households having debt, and divided by the sum of incomes, the ratios are as follows:

	Outstandings		Repayments	
	1970	1977	1970	1977
Ratio to income:	74.0	79.0	10.0	11.3

4. Repayments include scheduled payments of principal and interest and also property taxes where included in the monthly mortgage payment. About 95 percent of the respondents with mortgages included these latter items in repayment amount.

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EXHIBIT 13

PROPORTION OF HOUSEHOLDS 1/ WITH DEBT (MORTGAGE OR CONSUMER) AND DEBT/INCOME RATIOS

Approximate Income Quintiles			Percent Having Debt2/		For Households with Debt			
					Debt as a Percent of Gross Household Income (means of individual ratios)3/			
Dollar Amounts		Percent			Outstandings		Repayments	
1970	1977	Distribution	1970	1977	1970	1977	1970	1977
0 - 4000	0 - 5999	20.6	27.8	37.0	70.4	109.2	24.1	39.4
4001 - 7300	6000 -10999	19.4	55.0	58.8	51.8	71.3	16.2	19.9
7301 -11076	11000 -17499	24.3	72.8	74.5	64.8	75.5	15.6	17.8
11077 -15350	17500 -25000	18.3	81.8	83.3	71.0	76.1	14.4	15.7
over 15350	over 25000	17.3	74.3	81.1	56.7	63.0	11.1	11.8
All Households 1/3/		100.0	62.0	66.5	62.9	75.8	15.3	18.8

Sources: University of Michigan, 1970 Survey of Consumer Finances data tape; Federal Reserve Board, 1977 Consumer Credit Survey tape.

1. See Table 1, fn 1.
2. See Table 1, fn 2.
3. See Table 1, fn 3. When debts are summed for all households having debt and divided by the sum of these households' incomes, the ratios are as follows:

	Outstandings		Repayments	
	1970	1977	1970	1977
Ratio to income:	61.1	70.3	14.0	17.1

EXHIBIT 14

ESTIMATED EFFECT OF AGE DISTRIBUTION ON CONSUMER INSTALLMENT DEBT MEASURES

Age, head of household	U.S. population Percentage distribution		1977 Survey data		Population-Weighted Variables			
			Percent in Debt	Debt amount1/ (mean)	Percent in debt		Debt amount	
	1970	1977			1970	1977	1970	1977
(1)	(2)	(3)	(4)	(5)	(6) (Col 4x2)	(7) (Col 4x3)	(8) (Col 5x2)	(9) (Col 5x3)
Under 25	6.8	8.6	63.1	$ 1254	4.3	5.4	85	108
25-34	18.5	22.2	67.5	1614	12.5	15.0	299	358
35-44	18.6	16.7	65.9	1978	12.2	11.0	368	330
45-54	19.5	16.7	56.3	1548	11.0	9.4	302	259
55-64	17.1	15.7	41.3	989	7.1	6.5	169	155
65-74	12.2	12.6	16.2	223	2.0	2.0	27	28
75 and over	7.3	7.5	5.5	111	0.4	0.4	8	8
All age groups[2]	100.0	100.0	50.3	1266	49.5	49.7	1258	1246

Sources: Federal Reserve Board, 1977 Consumer Credit Survey data tape; U.S. Department of Commerce, Bureau of the Census, *Current Population Reports* (P-20 series), various issues.

1. Mean calculated including families with no debt.

2. For all age groups, columns 6 through 10 represent summations of figures shown for individual age groups. The "all age group" line for columns 4 and 5 is calculated directly from data for individual survey respondents.

EXHIBIT 15

PROPORTION OF LOW-INCOME HOUSEHOLDS[1]
WITH INSTALLMENT DEBT
BY AMOUNT OF TOTAL ASSETS[2]

Asset Value Category (Dollars)	Proportion of Households in Asset Category		Proportion of Asset Category with Some Installment Debt		Difference 1977 vs. 1970 (percentage points)
	1970	1977	1970	1977	
No Assets Reported	28.9	21.1	31.2	34.0	2.8
1 - 1,000	14.7	25.1	28.2	35.7	7.5
1,001 - 5,000	14.5	10.7	22.1	26.5	4.4
5,001 - 10,000	10.0	6.5	22.6	30.0	7.4
10,001 - 35,000	24.6	22.2	15.3	27.5	12.2
35,001 - 50,000	3.0	6.5	12.5	23.3	10.8
50,001 - 100,000	3.2	4.4	5.9	20.0	14.1
Over 100,000	1.1	3.5	0.0	37.5	37.5
All low-income Households[3]	100.0	100.0	22.9	30.7	7.8

---

[1] Low-income households consist of the first quintile of the income distribution in each year. In 1970 the low-income quintile included respondents with 1969 gross family incomes of $4,000 or below; in 1977 the quintile included all those with 1976 incomes of $6,000 or below. Respondents for which no asset information was available were excluded.

[2] Total assets cover both financial and physical assets, and include savings accounts, federal and state government securities, corporate stocks and bonds, mutual funds, certificates of deposit, residences and other real estate.

[3] In 1970 532 households were in the low-income quintile; in 1977 low-income households numbered 459.

EXHIBIT 16

AVERAGE INSTALLMENT REPAYMENTS-TO-INCOME RATIO FOR LOW-INCOME HOUSEHOLDS1/ WITH SOME INSTALLMENT DEBT BY AMOUNT OF TOTAL ASSETS2/

Asset Value Category (Dollars)	Proportion of Low-Income Debtors In Asset Category		Repayments/Income Ratio		Difference 1977 vs. 1970 (percentage points)
	1970	1977	1970	1977	
No Assets Reported	39.8	25.0	18.3	23.7	5.4
1 - 1000	18.6	30.6	23.6	25.4	1.8
1001 - 5000	13.6	10.5	23.3	26.7	3.4
5001 - 10,000	9.3	7.3	27.9	13.0	-14.9
10,001 - 35,000	16.1	12.9	14.9	22.3	7.4
35,001 - 50,000	1.7	5.6	12.5	27.7	15.2
50,001 - 100,000	0.8	3.2	2.0	43.3	41.3
Over 100,000	--	4.8	--	38.5	--
All low-income Debtors3/	100.0	100.0	20.1	25.1	5.0

---

1. Low-income households consist of the first quintile of the low-income distribution in each year. In 1970 the low-income quintile included respondents with 1969 gross family incomes of $4,000 or below; in 1977 the quintile included all those with 1976 incomes of $6,000 or below. Respondents for whom no asset information was available, or for whom a repayments-to-income ratio could not be calculated, were excluded.

2. Total assets cover both financial and physical assets, and include savings accounts, federal and state government securities, corporate stocks and bonds, mutual funds, certificates of deposit, residence and other real estate.

3. In 1970, 118 low-income households with debt were used in constructing the table; the number of such households for 1977 was 124.

EXHIBIT 17

MULTIPLE CLASSIFICATION ANALYSIS OF MAJOR HOUSEHOLD EXPENDITURES

Household Characteristics		Mean Purchase Frequency[1]	
Category	Size of category	Unadjusted	Adjusted
ALL RESPONDENTS	718	49.6	
Ratio of Installment Payments to Family Income (percent) (1977 Survey)			
No debt	320	40.6	48.9
0 - 10	225	56.5	49.3
11 - 20	90	56.7	50.5
Over 20	42	59.5	54.7
Income Categories (Dollars) (1977 Survey)			
0 - 5,999	378	29.8	37.4
6,000-10,999	125	42.8	46.1
11,000-17,499	101	57.4	50.8
17,500-25,000	68	56.1	53.1
Over 25,000	44	57.0	54.6
Changed Residence Within Past 12 Months (1978 Survey)			
No	506	49.6	51.2
Yes	39	64.1	53.0
Total Assets (Dollars) (1977 Survey)			
0 - 5,000	141	49.7	48.6
5,001-29,999	136	43.4	48.9
30,000-49,999	155	51.6	51.3
50,000-99,999	170	51.8	48.3
Over 99,999	116	50.9	51.2
Number of Minor Dependents (1977 Survey)			
None	378	42.9	51.7
1	125	58.4	51.8
2	101	62.4	51.3
3	68	48.5	35.7
Over 3	44	52.3	41.5

Household Characteristics		Mean Purchase Frequency[1]	
Category	Size of category	Unadjusted	Adjusted
Age of Family Head (Years) (1977 Survey)			
Under 25	44	72.7	79.3
25-34	173	68.2	67.1
35-44	133	55.6	55.9
45-54	138	50.0	[illegible]
55-64	117	30.8	28.7
65-74	80	30.0	33.7
Over 74	33	9.1	19.0
Inflation Perception (1978 Survey) (Percentage price increase last 12 months)			
0 - 1	26	[illegible]	[illegible]
2 - 5	112	50.0	47.0
6 - 9	144	57.0	52.5
10	141	51.8	50.8
11 - 14	67	56.7	55.4
15 - 25	104	46.2	[illegible]
Over 25	51	47.1	[illegible]
Better/Worse Now Than Year Ago (1978 Survey)			
Better	291	56.7	50.1
Same	212	50.0	[illegible]
Worse	209	48.8	51.0
Model Year of First Vehicle (1977 Survey)			
No car	57	23.8	45.2
1977	73	50.7	49.2
1976	73	[illegible]	54.8
1975	68	[illegible]	58.1
Older than 1975	447	[illegible]	49.5
Model Year of Second Vehicle (1977 Survey)			
No second car	307	42.4	49.4
1977	29	67.1	55.3
1976	39	60.7	55.9
1975	27	70.4	64.8
Older than 1975	315	51.5	47.0

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[1] Mean purchase frequency results are not shown for those "not ascertained" or "don't know" categories of the predictors.

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EXHIBIT 18

STATISTICAL MEASURES OF EXPLANATORY POWER FOR MCA TEST OF EXHIBIT 17

Unadjusted R^2	.171
Adjusted R^2	.116
β-Values for:	
Age of family head	.334
Income	.110
Number of dependents	.108
Model year of second vehicle mentioned	.084
Price perception	.070
Model year of first vehicle mentioned	.070
Move - 12 months	.063
Better or worse off now	.057
Repayments/income	.027
Total assets	.026

Unadjusted R^2 - This multiple correlation coefficient indicates the proportion of variance in the dependent variables explained jointly by 10 predictors.

Adjusted R^2 - This coefficient estimates the proportion of variance in the dependent variable jointly explained by the predictors, adjusted for the degrees of freedmon lost in the estimation process.

β - Provides a measure of the ability of the predictor to explain variation in the dependent variable after adjusting for the effects of all other predictors. This is not in terms of percent of variance explained, but is a measure of the number of standard deviation units the dependent variable moves when the explanatory variable changes by one standard deviation. Higher β values indicate better predictors.

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Effects of Consumer Loan Rate Ceilings on Competition Between Banks and Finance Companies

Krannert Graduate School of Management – Purdue University

EFFECTS OF CONSUMER LOAN RATE CEILINGS ON COMPETITION BETWEEN BANKS AND FINANCE COMPANIES

A. Charlene Sullivan*

Abstract

Whether or not commercial banks and consumer finance companies compete in making loans to consumers is an issue that has been addressed by the Federal Reserve Board and the Justice Department in a series of cases involving mergers of banks and finance companies and among finance companies. Generally, the Federal Reserve Board has concluded that consumer finance companies compete with commercial banks in the area of personal loans to individuals. Yet in recent cases, the Justice Department argued that these lenders do not compete. This paper reconciles the opposing points of view regarding the extent of competition between banks and finance companies for direct consumer loans. The data used in this paper provided the opportunity to examine inter-institutional competition in two local markets which differ extremely in terms of consumer loan rate structures. In addition, superior measures of consumer credit risk for a sample of borrowers from banks and finance companies were analyzed.

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Our results support the hypothesis that consumer loan markets are not segmented by risk when lenders operate under equal and unrestrictive consumer loan rate ceilings. However, in markets where there exists different and restrictive rate ceilings for banks and finance companies, the consumer loan market is segmented by risk. Thus, the anti-competitive effects of a merger between a bank and a finance company or between two finance companies must be considered in the context of the rate ceiling applicable in the markets common to the two lenders.

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Whether or not commercial banks and consumer finance companies compete in making loans to consumers is an issue that has been addressed by the Federal Reserve Board and the Justice Department in a series of cases involving mergers of banks and finance companies and among finance companies.[1] Generally, the Federal Reserve Board has concluded that consumer finance companies compete with commercial banks in the area of personal loans to individuals.[2] Until recently, this position has been echoed by the Justice Department.[3] However, in 1979, Justice opposed the acquisition of American Investment Company by Household Finance Corporation, principally on the grounds that making of direct cash loans by finance companies was a line of commerce within the meaning of section 7 of the Clayton Act.[4]

The two opposing points of view were brought into sharp focus in the differing opinions of the judges at the District Court and Court of Appeals levels. At the trial court level the judge held that the "market for the business of making direct cash loans consists of the consumer loan activities of commercial banks, credit unions, thrift institutions and finance companies."[5] The opposed merger was, therefore, not anticompetitive and the complaint of Justice was dismissed. In reversing that judgment, the Court of Appeals ruled that "finance companies offer unique products and services to a class of higher-risk customers than are serviced by other financial institutions."[6]

This study uses a significant body of empirical evidence not available at the time of the trial to reconcile these diverse positions. The data permit an improved analysis in three important respects. First, although the Federal Reserve Board has recognized that the market for personal loans to individuals is limited geographically to local markets,[7] significant weight in the Household case was given to a national survey of consumer loans [5]. This analysis remedies that deficiency by focusing on two local markets subject to diverse rate ceilings on commercial banks and finance companies.

Second, the Court of Appeals placed great emphasis upon differences in the risk characteristics of borrowers from banks and finance companies, although several of the research studies introduced as evidence provided incomplete measures of risk [5, 7, 9, 10, 16]. Later studies have suffered from similar deficiencies in the adequacy of their data bases [11, 12]. In contrast to these studies, the data used in this research were obtained from banks and finance companies, as well as from personal interviews with consumers in local markets. Consequently, a more refined measure of risk can be applied to borrowers from the two institutions in order to assess the degree of risk segmentation in these local markets.

Finally, the chief economic witness for the Justice Department appropriately criticized then existing studies that included borrowers from both banks and finance companies.[8] He pointed out that, if the bank loan had been obtained first, the borrower might have been in a higher risk class when the loan from the finance company was obtained. Hence, the existence of loans from the two lenders was not evidence that these lenders were competing for consumers in the same risk class. This study meets that problem by analyzing the risk characteristics of only two classes of consumers: those that had loans only from commercial banks and those that had loans only from finance companies.

The analysis enabled by this unique data base permits a reconciliation of the two opposing points of view. Where rate ceilings were nonrestrictive and equally applicable to banks and finance companies, the institutions competed actively for consumer loan customers.[9] This conclusion supports the position taken by the District Court. However, in the market where the two types of lenders operated under different rate ceilings, the credit risk characteristics of borrowers from banks and finance companies were significantly different--the position of the Court of Appeals. Thus, competition among banks and finance companies and appropriate policies relating to their proposed mergers are largely a function of the rate ceilings applicable to the local markets affected by the merger.

The next section of the paper examines the economic rationale for risk segmentation of the consumer loan market and the results of empirical studies of the phenomenon. In Section II, the data are described and in Section III the analyses and results are presented. We conclude in Section IV with a discussion of the public policy implications of the results.

I. Segmentation in the Market for Consumer Loans

In this section we examine the economic rationale for segmentation and review the evidence of the segmentation in the consumer loan market from prior analyses of the phenomenon.

Is Segmentation Rational? Boczar stated ([5], p. 245) in his study of segmentation: "Consumer credit researchers have generally believed that the market for consumer credit is substantially segmented on the basis of risk. That is banks supposedly serve low risk borrowers while finance companies cover the high risk borrower. This market risk segmentation is thought to be caused by regulatory constraints and the historical practices of the two industries."

Regulatory constraints aside, is there an economic rationale for segmentation?[10] Risk segmentation in the consumer loan market could be the result of economies of scale attainable from specialization in a particular risk class. In general, one might expect the contract enforcement efforts required for low-risk consumers to be substantially greater than those required for high-risk consumers. Credit contracts with high risk consumers often involve small loans with low monthly payments and inadequate collateral.[11] Since enforcement costs are largely fixed in relation to the size of loan lenders who have made the investment necessary to enforce high-risk contracts would be expected to specialize in order to reduce unit costs.[12] It is generally believed that consumer finance companies evolved as specialists to serve the needs of the low- and middle-income consumer who were considered as high risk.[13]

It is also generally believed that by historic practice banks emphasize stability and soundness and thus serve low-risk commercial and consumer customers. However, there are factors influencing bank management that reduce the probability that management would follow such a business strategy.

Commercial banks have been the only issuers of demand deposits and received a large percentage of loanable funds from such deposits at a zero explicit interest rate.[14] Thus, the cost of those funds was not related to the risk of banks' assets. In addition, the Federal Deposit Insurance premiums paid by a bank are unrelated to the probability of failure for that bank. With this subsidized source of funds commercial banks, compared to other lenders who did not have consumer demand deposits, could very profitably serve low-risk consumers. However, using results from the option literature, we know that if bank equity holders are viewed as holders of call options to buy the bank from the deposit-holders for the face amount of their demand deposits, the value of the option increases with the variance in the value of the bank.[15] Thus, holding other things constant, bank management would increase the risk of their investment portfolio in order to maximize shareholders' wealth.

In summary, we would not expect commercial banks to segment the consumer loan market on the basis of risk unless they were explicitly limited from serving high-risk consumers by restrictive rate ceilings on consumer loans. We tested this hypothesis by analyzing the credit risk characteristics of borrowers of banks and finance companies serving markets with restrictive and unrestrictive loan rate ceilings. The data analyzed allow us to supplement the results of that analysis with information collected from the two types of lenders concerning the "most likely" rate of charge on personal loans and managements' impressions of competitive conditions in each market.

Previous Empirical Evidence. Empirical studies of competition between banks and finance companies for consumer loans have been of two types. The first type involves estimation of the effect of one type of lender on performance measures of other types of lenders in the same market. Smith [16] found, in state-by-state analysis of a national sample of bank loans, that the number of finance companies in a market had a significant negative effect on bank loan rates. In contrast, Greer [9] found no evidence that the existence of alternative sources of consumer loans in a market had an effect on loan rejection rates of consumer finance companies. Both of these studies used data collected at the state level to estimate local market conditions which may have led to the inconsistent conclusions. Heggestad ([11], p. 45) analyzed auto loan rates in a national sample of SMSAs and concluded that "bank rates are not affected by competition from consumer finance companies, credit unions or savings and loan associations." He also found that finance company rates were adversely affected by the presence of mutual savings banks, savings and loan associations and commercial banks. He concluded that "credit markets are not segmented by risk class" and that "commercial banks are able to compete effectively for most consumer loan accounts. The segmentation that does occur is due to the advantage of low cost demand deposits. Other firms are not able to compete effectively with commercial banks as their costs are significantly higher." ([11], p. 45). However, his conclusion is suspect given the data analyzed. The loan rates studied were those quoted by various lenders on a $1400 auto loan secured by a vehicle valued at $3869. For such a well secured loan the risk characteristics of the borrowers are largely irrelevant to the quality of the loan [14]. Thus, one would expect to find wide variance and a great deal of overlap in the credit risk characteristics of consumers who were granted secured auto loans of this quality by banks and finance companies.

The other type of empirical studies of interinstitutional competition used cross-sectional analyses of risk characteristics of bank and finance company customers to evaluate the extent to which the two lenders segmented the consumer population by credit risk characteristics. Using national data, Boczar [5] found that two out of three finance company personal loan customers had risk-related characteristics that made them indistinguishable from bank loan customers. He concluded that "risk segmentation was not an effective barrier to interindustry competition" ([5], p. 255). However, he noted a need for more analysis with better risk measures and consideration of the effect of local market conditions such as loan rate ceilings on interinstitutional competition. Eisenbeis and Murphy ([7], p. 122) concluded that analysis of similar data from the state of Maine provided "little support for the belief that certain lender types are in fact segmenting markets or are serving significantly different customers." Finally, Johnson and Sullivan [12] found substantial overlap in the risk characteristics of a national sample of bank and finance company consumers. In the same study, personal interviews of finance company managers operating in Massachusetts revealed that, after a reduction in the small loan rate ceiling in that state, national finance companies actively pursued customers of "bankable" quality while managers of local, independent finance companies indicated that most of their customers could not get a loan from a bank. Each of these studies used a limited number of personal characteristics of borrowers in an attempt to measure credit risk.

II. The Data Base

The data used in the study were collected in early 1979 in personal interviews of credit managers of banks and finance companies and consumers living in similar local markets in Waukegan/North Chicago, Illinois and Lake Charles, Louisiana. These local markets were chosen such that the economic conditions and socio-economic and demographic characteristics of the populations were basically similar but state consumer loan rate ceilings were extremely different.[16] The markets were also selected because they were relatively isolated. In other words, lenders in the selected markets primarily served only consumers living in the markets, and consumers in the area limited their search for consumer loans to the lenders in the local market.

These data provide a unique opportunity to analyze the effects of rate ceilings on market segmentation. Gathered at the local market level, the data set contains finance company and bank managers' perceptions of competition between the two types of creditors. In addition, extensive data reflecting the credit risk of a sample of consumers from the same local markets who had personal loans either from a bank or from a finance company are available. The creditor and consumer data are described below.

Bank Data. Consumer credit managers from each of the 12 commercial banks serving the two local markets in Illinois and Louisiana cooperated in the survey. Thus, although the number of observations was not large, the data fully represent bank activity in each of the local markets. On average, banks in Illinois were smaller than banks in Louisiana, a difference that is probably explained largely by the fact that Illinois is a unit banking state, while Louisiana has county-wide branching.[18] The concentration index indicates that the banking industry in the Louisiana market was considerably more concentrated than that in the Illinois market.[19]

Finance Company Data. Thirty-two managers of 44 offices of consumer finance companies serving the local markets in Louisiana and Illinois were personally interviewed, for a response rate of 73 percent. About 90 percent of the finance companies offices in the sample from the Illinois market were offices of chains; 90 percent of those companies responding to the survey were national or regional chains. Only 36 percent of the finance company managers interviewed in Louisiana managed offices of finance company chains.[20] On average, offices of the finance companies providing data in Louisiana had twice the dollar amount of loans outstanding as did the finance companies in Illinois.

Consumer Data. The consumer data were taken from personal interviews of consumers who had either a bank loan(s) but no finance company loan or a finance company(s) but no bank loan. The types of loans the subjects in the two groups could have were direct home improvement, durables, hobby and recreation or personal.[21] Auto loans were not included because most consumer finance companies did not make direct auto loans in the two market areas and because of the effect of down-payments on loan risk.[22] The size of the consumer samples analyzed in the two markets is shown in Exhibit 1.

Rate Ceilings in Local Markets. The rate ceilings at the time of the survey for unsecured personal loans applicable to banks and finance companies in the two markets are shown below:

RATE CEILINGS (APR) 1979

	Illinois		Louisiana	
Terms of Loan	Bank	Finance Co.	Bank	Finance Co.
\$500 - 12 months	12.68	28.80	36.00	36.00
\$1000 - 12 months	12.68	25.67	35.45	35.45
\$2000 - 24 months	12.91	18.57	32.19	32.19
\$3000 - 36 months	12.83	20.24	29.56	29.56

The rate ceilings for banks in Illinois were low relative to those for finance companies. In contrast, banks and finance companies in Louisiana operated under the same high (by national standard) rate ceilings for unsecured personal loans.

III. The Analysis and Results

The consumer data set contained several indicators of the credit risk of borrowers. In the analysis, we tested for the significance of differences in the consumer risk measures of borrowers from banks and finance companies in these two local markets that differed primarily in terms of applicable consumer loan rate ceilings. We expected to find that bank borrowers in the high rate market were not significantly different from finance company customers in terms of risk characteristics.

EXHIBIT 1

RESPONDENTS WITH LOANS FROM A BANK OR FINANCE COMPANY ONLY

	Illinois	Louisiana
Bank only	61 (72%)	61 (69%)
Finance Company only	24 (28%)	28 (31%)
	85 (100%)	89 (100%)

Source: 1979 CRC Creditors' Survey, Credit Research Center, Purdue University

The null hypothesis is that the distribution of credit risk characteristics of personal loan customers of the two types of lenders were the same. In contrast, in the market with different rate ceilings for banks and finance companies, we expected to find that bank customers were significantly less risky than finance company customers. The data from the creditors' survey contained two variables that were used to augment the consumer data revealing the extent to which banks and finance companies were in competition for the same set of loan customers: the manager's perception of competition between the two types of lenders and the most likely rates of charge on unsecured consumer loans.

Risk Indicators. To evaluate the risk characteristics of the borrowers we calculated a credit score for each consumer, using a credit scoring system adapted from that of a major commercial bank.[23] Several other variables that are generally regarded as being indicative of individual credit risk such as debt-to-income ratios and loan turndown experience were also analyzed.

The consumer samples were divided into high-risk and low-risk segments by the credit score (Exhibit 2).[24] A chi-square test of the distributions of credit scores for customers of banks and finance companies in Illinois revealed that the distributions were significantly different at the one percent level. In contrast, the null hypothesis that the credit scores of customers of banks and finance companies in the Louisiana market were drawn from the same distribution could not be rejected at the one percent level. These results support our hypothesis that in a market with a uniform and nonrestrictive rate ceiling, banks and finance companies will not segment the unsecured

EXHIBIT 2

PERCENTAGE DISTRIBUTION OF CREDIT SCORES

Illinois

	High Risk	Low Risk	Total
Bank	36.1%*	63.9%	100%
Finance Company	70.8	29.2	100%

$\chi^2 = 7.04$**

Louisiana

	High Risk	Low Risk	Total
Bank	44.3%	55.7%	100%
Finance Company	64.3	35.7	100%

$\chi^2 = 2.33$

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*Thirty-six percent of bank customers in Illinois had credit scores such that they would have been classified as high-risk; 64 percent had credit scores that would have indicated low credit risk.

**Significant at the one percent level of confidence.

Source: 1979 CRC Creditors Survey, Credit Research Center, Purdue University.

loan market by credit risk. However, in both markets, more than 50 percent of finance company customers were in the high-risk category and more than 50 percent of bank customers were in the low-risk category.

From the consumer data we were also able to evaluate several other indicators of credit risk that a creditor could learn from loan applicants' credit reports. Specifically, a person who had been turned down for credit in the past might be considered a high credit risk by other potential lenders. Each individual was asked to indicate if he or she had been turned down for credit in the past few years (Exhibit 3). In Illinois, 54.2 percent of finance company customers reported that they had been rejected for credit, compared to only 18 percent of bank customers. A chi-square test indicated that there was a significant difference between the percentages of bank and finance company customers who had been turned down by other creditors. In contrast, in Louisiana there was not a significant difference in the percentage of bank and finance company customers (18 percent vs. 21.4 percent) that had been turned down for credit in the past.

Finally, the relationship between an individual's monthly installment debt payments to monthly income may be used as an indicator of a person's ability to repay a loan. We calculated monthly debt payments relative to pre-tax monthly family income for the consumers in our sample. Debt payments excluded mortgage debt, credit card debt, business and "other" debt greater than $15,000. The mean ratios for bank and finance company customers in the two markets are shown below:

EXHIBIT 3

CUSTOMERS PREVIOUSLY REJECTED FOR CREDIT

	Illinois		Louisiana	
	Percentage	(N)	Percentage	(N)
Bank	18.0%	61	18.0%	61
Finance Company	54.2	24	21.4	28

$\chi^2 = 9.39^*$ $\chi^2 = .01$

Responses to the query: Have you been turned down for credit in the last couple of years?

*Significant at the ten percent level of confidence.

Source: 1979 CRC Creditors Survey, Credit Research Center, Purdue University

Mean Monthly Debt Payments/Pretax Monthly Income

	Illinois	Louisiana
Bank customers	6.94	7.82
Finance company customers	12.06*	7.90

*Significant at ten percent level of confidence (one-tailed test).

A one-tailed difference in means test revealed that in Illinois the mean debt/income ratio for bank customers was significantly lower than the mean ratio for finance company customers. The ratio means were not significantly different in Louisiana. This result is consistent with those from the analyses of other risk characteristics of personal loan customers of banks and finance companies in the two markets. In Illinois, where banks and finance companies operated under different consumer loan rate ceilings, the personal consumer loan customers of the two lenders had significantly different risk characteristics. In Louisiana where banks and finance companies operated under a very high rate ceiling which applied equally to both lenders, the hypothesis that the distributions of risk characteristics of personal loan customers of the two types of lenders were the same could not be rejected at the ten percent level.

Perceived Competition. In the creditors' survey, both finance company and bank managers were asked to indicate their major competitors for direct consumer loans. In the Illinois market, 43 percent of bank managers viewed finance companies as major competitors; only 30 percent of finance company managers viewed banks as major competitors (Exhibit 4). By contrast, in Louisiana 60 and 73 percent of bank and finance company managers respectively viewed each other as major sources of

EXHIBIT 4

PERCEIVED COMPETITION BETWEEN BANKS AND FINANCE COMPANIES FOR DIRECT CONSUMER LOANS

	Illinois	Louisiana
Bank managers view finance companies as major competitors		
Yes	43%*	60%
No	57	40
	100%	100%
Finance company managers view banks as major competitors		
Yes	30%	73%
No	70	27
	100%	100%

Responses to the query: What lenders do you consider as major competitors for direct consumer loans?

*Forty-three percent of bank managers in Illinois viewed finance companies as a major source of competition; 57 percent of bank managers did not view finance companies as a major source of competition.

Source: 1979 CRC Creditors Survey, Credit Research Center, Purdue University.

competition. The major reasons given by bank managers for their perception of finance company competition in Louisiana was service provided by finance companies. Finance companies' managers in Louisiana indicated that their major reasons for perceiving banks as competitors were that banks provided loans at lower rates than finance companies and that banks provided comparable services. These data are consistent with earlier evidence that in markets with nonrestrictive rate ceilings commercial banks and finance companies actively competed for the same consumer loan customers.

Rates (APR) of Charge. Finally, the most likely rates of charge for unsecured consumer loans from banks and finance companies would indicate the extent to which the two lenders compete for the same customers. In an efficient market financial assets will be priced such that the expected risk-adjusted rate of return on all assets will be the same. Thus, holding everything else constant, the extent to which the risk of two securities differed may be revealed by the differences in the expected gross yield (APR) of the two securities.

In the creditors' survey, we asked the credit managers of banks and finance companies to specify the most likely rate (APR) that would be charged at the time of the study on three types of unsecured personal loans.[25] The mean responses provided are shown in Exhibit 5. Examination of the most likely quoted rates and the ceiling rates for banks and finance companies operating in Illinois reveals that both types of lenders were charging approximately the ceiling rates for all three types of loans. And, the most likely finance company customer was more risky than the most likely bank customer.

EXHIBIT 5

MEAN "MOST LIKELY" RATES ON PERSONAL LOANS (APR)

	Illinois		Louisiana	
	Bank	Finance Company	Bank	Finance Company
12-month unsecured personal loan for $1000	11.6	25	12.5	33
N =	(7)	(9)	(5)	(16)
24-month unsecured personal loan for $2000	13.6	19.0	15.3	29.0
N =	(7)	(9)	(5)	(15)
24-month secured loan for $2000	13.3	19.1	15.8	33.0
N =	(6)	(9)	(5)	(18)

Responses to question "What is the 'most likely' rate you would charge on the following types of loans?"

Source: 1979 CRC Creditors Survey, Credit Research Center, Purdue University

In Louisiana, the mean finance company rates were about 300 basis points below the ceiling. Mean bank loan rates were considerably below the ceiling. The mean difference between finance company and bank rates in Louisiana was 1710 basis points. Although banks and finance companies in Louisiana operated under the same rate ceiling, the "most likely" personal loan customer of finance companies was more risky than the "most likely" loan customer of banks. These data are thus consistent with the results of the analysis of consumer credit scores in Louisiana. The difference between the modal rates on bank and finance company loans in that market reflects the differences revealed in Exhibit 2 between the most likely customers of banks and finance companies in Louisiana. However, these are only modal rates, and the analysis of the risk characteristics of borrowers in Louisiana has shown that the null hypothesis that these borrowers were drawn from different populations with different risk characteristics cannot be rejected. Thus, a mere difference in rates typically charged by banks and finance companies is not sufficient evidence that these lenders were not competing for the same customers in a state where rate ceilings were nonrestrictive and applicable to both types of lenders.

IV. Summary and Conclusions

Although there have been several empirical studies that concluded that banks and finance companies do compete for the same consumer customers, data problems and misspecification of markets limited the strength of the evidence. In this study we analyzed competition for direct unsecured consumer loans at the local market level under different regulatory regimes. Our results support the hypothesis that consumer loan markets will not be segmented by risk when lenders operate under equal and unrestrictive consumer loan rate ceilings. However, in markets where there are different and restrictive rate ceilings for banks and finance companies, the consumer loan market will be segmented by risk.

These results are of considerable importance in the evaluation of the anti-competitive effects of mergers of financial institutions. Most states have laws that permit banks and finance companies to make consumer loans at rates exceeding the rates provided by state usury statutes. Where the rate ceilings are significantly higher for finance companies than for commercial banks, the legislature has, in effect, artificially segmented the consumer loan market. In these states the results of this study suggest that the merger of a bank and a finance company is not anti-competitive, since they are serving different risk segments of the market. However, the merger of two finance companies could reduce competition for high-risk consumer loans in those local markets where they both have offices.

In contrast, in states with high, unrestrictive rate ceilings that are about the same (or equal) for banks and finance companies, the merger of a bank and a finance company or two finance companies serving the same local markets could result in a reduction in competiton. Whether or not the merger would be anti-competitive would depend upon the resulting market share of the merged firm, as well as upon the market shares held by the leading firms operating in each local market.

An additional public policy implication of this study has to do with the issue of setting rate ceilings. Recently, both state and federal legislatures have been asked to consider revisions to laws governing maximum rates of charge for consumer loans. Given that competition in consumer loan markets is desirable, the results of this study show that restrictive rate ceilings that vary by type of lender promote risk segmentation and inhibit competition. Therefore, as rate ceilings are raised, one would also hope to see the equalization of ceilings for all lenders.

FOOTNOTES

[1] In November 1980, banks held 47 percent of total outstanding consumer instalment credit and finance companies held 25 percent. [Federal Reserve Statistical Release, G.19.]

[2] Order dated January 30, 1974 Denying Acquisition of Dial Financial Corporation by The Chase Manahttan Corporation 39 Federal Register 4814 (1974); Order dated August 3, 1973 Denying Acquisition of Public Loan Company by Bankers Trust Corporation, 38 Federal Register 21822 (1973), 59 Federal Reserve Bulletin 694 (1973).

[3] "Today, banks and finance companies compete in supplying retail credit needs for consumers; this is present in various forms of consumer loans and credit card transactions. In the long run, with the merging electronic technology, banks and finance companies are likely to become competitors for consumer services on an even broader scale." Department of Justice letter reacquisition of GAC Finance by Bank America Corporation, June 26, 1973.

[4] United States vs. Household Finance Corporation, HFC American, Inc., and American Investment Company. Hereinafter cited as U.S. vs. HFB. U.S. District Court for the Northern District of Illinois, Eastern Division, No. 79 C 80.

[5] Ibid., Judgment Order, March 22, 1979.

[6] U.S. vs. HFB, U.S. Court of Appeals for the Seventh Circuit, No. 79-1313, Decision August 10, 1979.

[7] For example, in his order approving the acquisition of Local Finance Corporation by Fidelity Corporation of Pennsylvania (May 29, 1973) the Federal Reserve Board was concerned with the proximity of some of Local's consumer finance subsidiaries to the offices of Fidelity. It concluded, however; "Although there may be some overlap in the customers served by Local and Applicant's banking subsidiary, it does not appear that consummation of the proposed acquisition would have a significantly adverse effect on competition for consumer loans . . . . in view of the small amount of outstandings held by Local's subsidiaries in these areas and the great number of consumer loan sources present in those markets."

[8] U.S. vs HFB. U.S. District Court for the Northern District Illinois, Eastern Division, Affidavit of Jon M. Joyce, January 8, 1979.

[9] Outside of about nine states that have adopted the Uniform Consumer Credit Code (UCCC), most states have rate ceilings that are different for finance companies and other lenders.

[10] Stigler [17] proposes product differentiation as a type of collusion which reduces the risk of price cutting in an oligopolistic market.

[11] This is the rationale for special exemptions of lenders of small loans from state usury ceilings.

[12] Benston ([3], p. 154) found that the cost of servicing finance company borrowers was high by bank standards. On average finance companies had $64-$72 per loan in operating costs compared to $24 per loan for banks. "Knowing customers individually, working with them when they miss payments, etc., is expensive, but no doubt cheaper than accepting losses or engaging in court action to collect past due accounts."

[13] Boczar ([5], p. 247) points out "The risk segmentation hypothesis had traditionally been applied to consumer finance companies. It has usually not been alleged that banks and sales finance companies, particularly the captive companies, engage in risk segmentation.

[14] The Federal Deregulation and Monetary Control Act enabled banks and thrift institutions to have interest bearing checking accounts called NOW accounts but the explicit rate paid on these accounts is still limited by law and decontrol will be gradual over a 6-year period. In addition, credit unions may offer share draft accounts and money market funds offer check-writing capability.

[15] See Galai and Masulis [8].

[16] The creditors' remedy restrictions in the two markets were also different. However, the restrictions were the same for each lender within a market and thus were not expected to affect the results of this study.

[17] A summary of the demographic characteristics of the populations in the two local markets are available from the author.

[18] Kidwell and Peterson [13] found that inter-bank competition for direct consumer loans was greater in unit banking states than in branching states.

[19] The Herfindahl index for banks in the Louisiana market was .376 compared to an index of .204 in the Illinois market.

[20] The cost of capital for a national finance company was lower than the cost for a local finance company which borrows primarily from banks [1980 NCFA Fact Book, p. 69]. Thus, the local finance company may not effectively compete for the bankable loan customer. The fact that the majority of firms providing data in the Louisiana market were local offices would increase the probability of rejecting the null hypothesis of no segmentation in that market.

[21] A borrower could have multiple loans but had to have loans from only banks or only finance companies. Fourteen respondents from the two markets had personal loans from both banks and finance companies and were excluded from the analysis. Consumers in either group could have had a credit card from either a bank or a finance company.

[22] See [14] for an empirical analysis of the relationship between borrower characteristics, expost probability of default and size of downpayment for auto loans.

[23] The variables included in the scoring system were years on job, employment status, industry of job, education, occupation, have checking and savings accounts, credit cards, number of dependents, total outstanding debt excluding mortgage and credit card debt.

[24] The raw credit scores ranged from 114 to 250. Those with scores less than 180 were classified as high risk; those with scores greater than or equal to 180 were classified as low-risk.

[25] One of these loan types was secured by household goods which are generally considered to have little value because of the thinness of the resale market for used household goods.

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WORKING PAPER NO. 39

Second Mortgage Survey
1980

Krannert Graduate School of Management – Purdue University

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SECOND MORTGAGE SURVEY, 1980

Richard L. Peterson, Dan A. Black,
and Aaron L. Phillips*

Abstract

In 1980, National Second Mortgage Association members provided extensive data on their second mortgage operations. This study presents data on the size and terms of second mortgages, growth in second mortgage holdings, the profitability of second mortgage lending, and the delinquency, foreclosure, and loss experience of various lenders. Data are shown for each of the major lender groups (bank-affiliated finance companies, other finance companies, depository institutions, and mortgage bankers) that responded to the survey. It also compares the behavior of lenders affiliated with bank-holding-companies to that of other finance companies. Finally, this study estimates the speed with which second mortgage portfolios are liquidated. It examines total liquidations, refinancings of outstanding debt, and cash liquidations under various assumptions.

Major findings include the fact that growth in the value of second mortgage outstandings in 1979, which was extremely rapid, was fueled as much by increases in average loan sizes as by increases in the number of loans outstanding. Also, due in part to low foreclosures and loss rates,

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second mortgage lending remained very profitable in 1979, even though costs of funds were substantially larger than in 1978. Finance companies behaved much the same regardless of their affiliation with bank holding companies. However, the bank-affiliated finance companies seemed more willing to make larger, longer-maturity loans than nonaffiliated finance companies. Finally, liquidation rates on second mortgages generally ranged between 25 to 50 percent of balances outstanding at the end of the previous year. Because a majority of companies experienced refinancings equal to ten percent or more of their new loan extensions, cash repayment rates were lower than second mortgage liquidation rates in general.

SECOND MORTGAGE SURVEY, 1980

Richard L. Peterson, Dan A. Black,
and Aaron L. Phillips

I. Introduction

The second mortgage market has grown rapidly in recent years. Inflation has increased both potential borrowers' needs for funds and the value of their housing equity. Meanwhile, various regulations have increased lenders' desires to reduce risk and increase their profitability by making large, well-secured loans at moderate rates. However, very little is known about the nature of second mortgage lending and the second mortgage market.

In order to obtain better information on second mortgage lending, the Credit Research Center (CRC) and the National Second Mortgage Association (NSMA) have cooperated in collecting and processing data compiled by members of the National Second Mortgage Association on their second mortgage lending.

Information obtained in the 1979 survey of NSMA members for year-end 1978 were published by Peterson and Drecnik in CRC Working Paper No. 33. Data for the 1980 NSMA survey are summarized in this paper.

This paper is divided into several sections. Following the introductory section, section II discusses the overall results of the survey. Next, section III compares second mortgage loan and operating statistics for several major types of second mortgage lenders. Following that, section IV addresses the question of whether finance company affiliates of commercial banks differ from other finance companies in their loan policies and operating characteristics. Section V focuses on the issue of how rapidly second mortgage portfolios are liquidated. Finally, section VI summarizes the major findings of the 1980 CRC-NSMA survey.

II. The 1980 Survey

The 1980 CRC-NSMA survey was very similar to that conducted in 1979. All members of the National Second Mortgage Association were mailed a questionnaire (Appendix A) asking them to provide information on their second mortgage loan holdings, policies, and operating experience. Overall 60 members of the NSMA responded to the 1980 questionnaire. However, some did not hold second mortgages at the time of the survey. Thus, 57 respondents reported data in varying degrees of detail. The majority of the NSMA respondents were consumer finance companies; but a number of mortgage bankers, depository institutions and their affiliates also responded to the survey (Table 1). Overall, the 1980 reports allow the following conclusions to be drawn.

(1) Second mortgage outstandings grew very rapidly in 1979, with most respondents experiencing portfolio growth of approximately 50 percent. Newer and smaller companies grew much faster--sometimes several hundred percent in a year. However, a few companies decreased their participation in the market. Overall, at year-end, NSMA respondents reported holdings of $4.8 billion in second mortgage outstandings (Table 2).

(2) Growth in second mortgage portfolios was strongly affected by increases in the average size of outstanding mortgages. While growth

TABLE 1

NATURE OF NSMA RESPONDENTS*

	Number
Independent finance company	21
Finance company affiliate of non-bank	4
Finance company affiliate of commercial bank	13
Commercial bank	4
Savings and loan, mutual savings bank, and their affiliates	4
Mortgage banking affiliate of commercial bank	3
Other affiliate of commercial bank	2
Independent mortgage banker	4
Other mortgage banks	1
Other	1
Total	57

*"Record Data" and one or two other firms did not report specific information, thus, they are not included in these tabulations.

TABLE 2

SECOND MORTGAGE LOAN HOLDINGS AND GROWTH, 1979

(NSMA Members)

Total Value of:			
Loans Outstanding, Year-end	1979	Number of Respondents	Average Holdings/ Respondents
Number	563,000	52	10,827
Gross dollar value	$4.77 billion	43	111 million
Net dollar value	$3.50 billion	43	81 million
Loans Extended			
Number	325,661	53	6,145
Total dollar value	$1.66 billion	28	59 million
Value of refinancings	$0.61 billion	28	22 million

Distribution of Responses For:	Low	High	Mean*	Median	(# of Respondents**)
Growth in Loans Outstandings (in %) from Year-end 1978					
Number of loans	-30.8	728.3	64.1	27.1	40
Net dollar value of loans	-17.1	423.4	68.2	48.8	42
Gross dollar value of loans	-14.3	1,712.0	71.8	50.0	40/38
Average Size of Loans ($)					
Net loans outstanding, 1979	1,234	31,444	9,998	7,821	50/49
Net loans outstanding, 1978	1,080	24,922	7,844	7,200	40
Household loan extensions (4th quarter 1979)	1,374	27,417	11,393	10,580	42/39
Business loan extensions (4th quarter 1979)	1,700	259,286	48,874	18,500	13
Purchased loans, 1979	786	25,917	9,492	7,000	17/15
Purchased loans, 1978	1,604	13,794	6,476	4,801	6/5
Loans sold, 1979	4,100	17,929	13,183	13,732	9/6
Loans serviced, 1978	770	12,162	6,013	3,471	5
Percentage of New Money in Loan Extensions, 1979 (%)	8.1	100(15)	87.2	91.1	39

*Adjusted averages were obtained after eliminating values that appeared to be unrealistically high or low.

**Where two numbers are reported, the first number indicates how many firms reported the information and the second number indicates the number of reports that were actually used in calculating the adjusted mean.

in the number of loans made was substantial, averaging better than 25 percent at most firms, it was not as high as the growth rate in the dollar value of outstandings. Average loan sizes increased substantially. From 1978 to 1979 the average size of second mortgages outstanding grew from under $8,000 to $10,000 (Table 2).

(3) Only a limited number of respondents purchased, sold, or serviced second mortgages (Table 2).

(4) Most companies reported that, of their new loan extensions, approximately 90 percent represented "new money" lent to borrowers rather than refinancings of existing debt. Further, 15 respondents reported no refinancings at all. However, at some companies, refinancings accounted for a large proportion of total credit extensions (Table 2).

(5) Second mortgage lending appeared to be a profitable activity. Interest returns on second mortgage portfolios--"gross interest/average receivables"--of around 14 percent generally exceeded respondents' costs of borrowed funds--"interest paid/average borrowings"--(by several percentage points). In addition, many respondents generated noninterest revenues equal to several percent of their outstanding portfolios. As a result, pretax return on equity for most companies averaged over 20 percent (Table 3).

(6) Considerable variation existed in loan maturities at different companies--with maturities ranging from 24 to 180 months. However, many companies made five-year loans, and, on average, respondents made seven-year second mortgage loans. Less variation existed in equity requirements. The majority of companies made second mortgages for 80 percent of equity (Table 4).

TABLE 3

OPERATING INCOME AND RATIOS

(SECOND MORTGAGE PORTFOLIOS ONLY)

Income:	Low	High	Mean*	Median	Number of Respondents**
Pretax income/avg. receivables (%)	0%	63.2%	8.7%	2.8%	28/27
Pretax income/avg. equity (%)	2.1	62.6	25.4	20.1	20/18
Return on receivables:					
Gross interest/avg. receivables (%)	3.3	26.4	14.4	13.8	29/25
Non-interest revenues/ avg. receivables (%)	0	12.83	-	2.1	25/19
Total revenues/avg. receivables (%)	7.2	54.2	18.8	17.0	27/23
Interest expense:					
Interest paid/avg. borrowings (%)	6.7	14.0	10.75	10.75	23/18
Average borrowings/ average receivables (%)	0	91.2***	***	81.1	26/22

*Adjusted means apply to all cases that are not unrealistically high or low.

**The number of reporters is given twice. The first number indicates the number that reported relevant data, the second number indicates the number of reports that were included in the grand mean. Often reports of mortgage bankers had to be excluded because they had high non-interest income and low average receivables.

***Many reporters calculated average receivables and average borrowings differently. As a result, four reporters indicated that average borrowings exceeded average receivables, and mean value calculations were suspect.

TABLE 4

LOAN TERMS AND COMPOSITION, LAST QUARTER 1979

	Low	High	Mode	(#)	Mean	Median	Number of Respondents
Maturity of household loans	24 mo.	180 mo.	60 mo.	(7)	81.3 mo.	84 mo.	47
Maximum loan as percent of equity	40%	95%	80%	(13)	75.2%	80%	39
Avg. size of loans to households	$1,374	$27,417	-		$11,393*	$10,580	42/39*
Avg. size of loans to business	$1,700	$259,286	-		$48,874	$18,500	13
Number of loans for personal or household expenditures	0 (2)	35,531	-		3,524	250	27
Number of loans for nonconsumer purposes	0 (15)	263	-		96	102	27
Percentage of loans made for household purposes	0 (2)	100 (15)	-		86.8%	99.98%	27

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*This mean was calculated after eliminating unrealistic values, the second number records the number of reports included in the adjusted mean.

(7) The vast majority of second mortgage loans made by NSMA respondents were made to households. However, a few institutions specialized in loans to business, and one made very large loans to business (Table 4).

(8) Delinquency rates on second mortgage loans were generally relatively low. Possibly lower numbers applied but, because a number of companies did not separate second mortgage delinquencies from other delinquencies, it was not possible to ascertain true delinquency rates with any degree of precision. This problem was further compounded by the fact that, while some companies reported net delinquencies, most reported gross delinquencies (including unearned finance charges), and some did not indicate how they calculated delinquencies (Table 5).

(9) Considerable variation existed in delinquency and curing policies. However, most respondents required that accounts be 100 percent current in order to be off the delinquency list (Table 5).

(10) Foreclosures on second mortgage loans were extremely low, averaging under one-tenth of one percent of balances outstanding at the end of the previous year. Chargeoffs were also low, with most respondents reporting chargeoffs below two-tenths of one percent of average balances outstanding. Further, small recoveries reduced the net chargeoff rate to approximately one-tenth of one percent of average outstanding balances. While considerable variation existed in chargeoff rates (particularly since some respondents apparently reported chargeoffs on nonmortgage as well as second mortgage loans), overall it appears that second mortgage lending generated few losses. If loan growth should slow and rates of house price inflation fall, chargeoff rates will probably rise in the future. However, they will be rising from a very low base (Table 6).

TABLE 5

DELINQUENCY STATISTICS, 1979

Percent of Loans	Low	High	Average	Median	Number of Respondents
Current or past due less than 60 days	85.74	100 (4)	97.55	99.0%	51
Past due 60-89 days	0 (7)	4.05	0.93	0.57%	50
Past due 90-179 days	0 (7)	7.54	1.23	0.43%	47
Past due 180-269 days	0 (25)	4.50	0.26	0.38%	44
Past due 270+ days	0 (30)	4.70	0.18	0.27%	44

(NOTE: 65 percent reported delinquencies that include unearned finance charges.)

Delinquency and Curing Policies (% of respondents)	Declared Delinquent If Not	Declared Cured If
100% current	50.9%	63.2%
90-99% current	7	1.8
90-99% of most recent	5.3	
80-89% of most recent	1.8	
60-69% of most recent	1.8	
50-59% of most recent	1.8	
50-59% current	3.5	
Under one-half payment behind	1.8	1.8
Within 85%	3.5	1.8
100% in 5 of 6 months	1.8	
60-day deferral in 12 months	1.8	1.8
Not answered or not applicable	17.67	21.1
2 consecutive payments		5.3
3 consecutive payments		1.8
5 consequent payments		1.8

TABLE 6

CHARGEOFFS AND FORECLOSURES, 1979

	Low (#)	High	Simple Average	Adjusted Average*	Median	Number Reporting**
Foreclosures in last year	0 (19)	49	6.6	--	1	40
Foreclosures as % of loans at end of previous year	0 (13)	0.5%	0.06%	--	0.09%	30
Gross chargeoffs (% of average receivables)	0 (16)	3.78	1.38%	0.38%	0.11%	46/49
Recoveries (% of average receivables)	0 (18)	2.39	0.24	0.24	0.02	42/42
Reserve for losses (% of year-end receivables)	0 (5)	70.15	5.78	1.42	1.52	37/43

*Adjusted averages were obtained after eliminating values that appeared to be unrealistically high or low. Data problems appeared to exist in some cases when chargeoffs and loss reserves were reported for all loans, not just for second mortgages.

**Where two numbers are reported, the first number indicates how many firms reported the information and the second number indicates the number of reports that were actually used in calculating the adjusted mean.

Analysis of the data was hindered by a number of factors. First, some respondents apparently reported data applicable to their full portfolio rather than to their second mortgage holdings, per se. This practice particularly affected data on operating statistics. Second, some respondents reported some data in thousands of dollars and other data in dollars. If the data did not conform to data requests, such reporting often made comparisons difficult. Appendix B discusses data problems in more detail.

In spite of the problems associated with interpreting specific responses, and average ("mean") values affected by those responses, the general observations made above appear to hold for second mortgage lending in general. Thus, overall, the data allow us to conclude that second mortgage lending is a rapidly growing, profitable activity. Loan maturities are long and average loan sizes appear to be increasing rapidly. So far, at least, delinquency rates, chargeoffs, and foreclosures all seem to be quite low. Because of high profitability and relatively low losses, most lenders seem to be rapidly increasing their second mortgage lending activities.

III. Comparative Statistics

There was a sufficient number of respondents to the survey that the data could be subdivided according to the type of respondent. This allowed comparative analyses to be made regarding the loan terms, operating characteristics, delinquency and loss experience, and growth characteristics of each group of firms. The four groups that were segregated for comparative analysis were: finance companies affiliated with bank holding companies, other finance companies, commercial banks and thrift institutions, and mortgage bankers.

Table 7 presents data on the second mortgage loan characteristics for each lender group. Those data indicate that outstanding second mortgage loans were largest at banks and thrift institutions and smallest at finance companies. The range in average loan sizes was great--particularly at finance companies not affiliated with banks. Clearly, some companies specialized in widely different lines of business. On balance, however, consumer finance companies not affiliated with banks made smaller loans with shorter maturities and higher rates of return than other lenders. Their homeowner equity requirements varied widely--from the most lenient to the most restrictive of all lenders.

Bank-affiliated finance companies behaved very much like independent finance companies except that they made somewhat larger loans (some were clearly business-oriented) for longer maturities and with fairly lenient (80%) loan-to-equity standards. Bank-affiliated finance companies also earned much higher rates of interest relative to their outstanding receivables than nonfinance companies in the sample.

Mortgage bankers made relatively large loans at relatively low rates of return for the longest maturities of any lender group. Banks and thrift institutions consistently made larger loans than other lenders, at relatively low rates with relatively restrictive equity requirements.

From the comparative operating cost data presented in Table 8, it can be seen that most lenders earned net profits equal to at least two percent of their average receivables outstanding. With few exceptions, mortgage bankers (which generally hold small stocks of receivables relative to the amount they service) earned even higher rates of return.

TABLE 7

COMPARATIVE DATA ON LOAN CHARACTERISTICS

		Type of Lender			
		"Independent" (Non-Bank) Finance Company*	Bank-Affiliated Finance Company	Bank or Thrift Institution	Mortgage Banker
Average Loan Size for Outstanding Loans (median)		$ 7,767	$ 7,945	$14,395	$11,536
1979 Extensions,	Low	1,780	7,280	7,861	9,266
	High	42,396	203,652	36,167	30,962
	Median	10,276	11,223	15,830	11,072
Maturity,	Low	24 mo.	36 mo.	48 mo.	65 mo.
	High	180	150	115	180
	Median (Mode)	60	84	85	104
Maximum Loan/ Appraised Equity (%)					
	Low	40%	70%	60%	70%
	High	95	85	80	82
	Median (Mode)	75	80	71.5	76
	Average				
Loan Interest/ Average Receivables (%)					
	Low	7.2	12.2	6.6	7.2
	High	26.4	26.2	13.8	18.8
	Median (Average)	17.6	17.0	11.7	11.9

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*This category included a small number of subsidiaries of non-banking firms--but they are not associated with banks in any way.

Mortgage bankers generated much higher rates of noninterest earnings relative to their total receivables than other lenders--primarily because they service more loans than they hold. However, because of low interest returns, their total revenues were the lowest, relative to average receivables, of all lenders.

In contrast with mortgage bankers, finance companies generated the highest revenues relative to their average holdings of second mortgage receivables. Banks and thrift institutions, which like mortgage bankers, generated relatively low interest revenues, recorded only slightly higher gross revenues (relative to their outstanding receivables) than mortgage bankers.

Because of differences in leverage and borrowing costs, differences in gross rates of return on average receivables (total revenues over average receivables) did not generate equivalent changes in rates of return on stockholders' equity. In fact, the median pretax return on equity averaged 20 percent to 21 percent for all lender groups for which reliable computations could be made.

Differences in leverage varied considerably among institutions--with net borrowed funds ranging from zero to more than the face value of second mortgage receivables held. Most institutions financed their second mortgage holdings with large borrowings. However, most depository institutions and their subsidiaries did not report high leverage because they did not report deposits as "borrowed" funds.

In spite of their low reported "borrowings," banks and thrift institutions paid the highest rates for their borrowed funds--possibly because they had to refinance their short-term debts at high rates in

TABLE 8

COMPARATIVE OPERATING STATISTICS, 1979

	Independent Finance Companies*	Bank-Affiliated Finance Companies	Commercial Banks and Thrift Institutions	Mortgage Bankers
Ratio of pretax income/ average receivables (%)				
Low	0	0	0	1.5
High	62.6	6.6	4.4	63.2
Median	2.8	1.5	2.4	6.9
Ratio of non-interest revenues/ average receivables (%)				
Low	0	0	0.4	1.3
High	12.3	6.1	1.4	17.6
Median	0.01	1.3	1.0	4.4
Ratio of total revenues/ average receivables (%)				
Low	7.2	14.3	7.6	11.7
High	50.4	19.0	14.4	17.6
Median	20.9	18.3	14.2	13.3
Ratio of pretax income/ average equity (%)				
Median	20.0	21.0	**	20.2
Ratio of average borrowing/ average receivables (%)				
Low	0	72.6	0	0
High	115.8	111.7	93.4	192.0
Median	20.8	89.6	1.27	89.3
Ratio of interest costs/ average borrowing (%)				
Low	7.4	10.0	12.3	6.7
High	14.0	12.6	12.3	13.8
Median	11.0	10.9	12.3	9.5

---

*This category included a small number of subsidiaries of non-banking firms--but they are not associated with banks in any way.

**Reported data were not useful for making such comparisons.

1979. Finance companies of all types paid somewhat lower average amounts for borrowed funds, while mortgage bankers had the lowest interest costs per dollar of debt outstanding. The fact that none of the institutions paid as much for borrowed funds as they earned on their second mortgage portfolios allowed the majority to earn at least a 20 percent pretax rate of return on the equity they had invested in second mortgage lending.

An important factor contributing to the profitability of nearly all second mortgage mortgage lenders was the fact that their foreclosures, chargeoffs, and delinquency rates were generally very low (Table 9). Foreclosures averaged well under one-tenth of one percent and chargeoffs also were generally low. Most mortgage bankers charged-off practically nothing while a majority of each of the other creditors charged-off less than one-fourth of one percent of their average receivables. Some suspiciously high chargeoff and recovery data were reported by individual commercial banks, thrift institutions, and independent consumer finance companies, however. It is likely that some of those institutions failed to segregate their second-mortgage related chargeoffs or recoveries from chargeoffs or recoveries applicable to their full portfolio. A similar problem could apply to some of the reported delinquency statistics. Nonetheless, median chargeoff and delinquency data at all lender groups indicated that the loss and delinquency experience of the vast majority of second mortgage lenders was very favorable.

Additional data (Table 10) obtained from the respondents to the 1980 survey indicated that the vast majority of second mortgage credit extensions

TABLE 9

COMPARATIVE DATA ON FORECLOSURES, CHARGEOFFS, AND DELINQUENCIES, BY TYPE OF LENDER, 1979

	Independent Finance Companies*	Bank-Affiliated Finance Companies	Commercial Banks and Thrift Institutions	Mortgage Bankers
Foreclosures/Previous years outstandings (%)				
Low	0 %	0 %	0 %	0 %
High	0.4	0.15	0.11	0.41
Median	0.05	0.03	0.004	0.08
Gross charge-offs/Average balances outstanding (%)				
Low	0	0	0	0
High	3.78	0.925	0.38	0.36
Median	0.17	0.21	0.06	0.01
Recoveries/Average balances (%)				
Low	0	0	0	0
High	1.24	1.04	2.39	0.35
Median	0.03	0.02	0.73	0.02
Net charge-offs/Average balances (%)				
Median	0.15	0.23	0.34	0.02
Reserve for losses/Outstandings (%)				
Median	2.16	1.85	0.69	0.02
Delinquencies/Outstandings (%)				
60-90 days, Low	0	0	0	0
High	4.50	1.25	2.18	3.0
Median	0.98	0.58	0.08	0.32
Over 60 days, % of outstandings Median	2.2%	0.9%	0.6%	0.6%

---

[*] This category included a small number of subsidiaries of non-banking firms--but they are not associated with banks in any way.

represented new funds, rather than refinancings of existing debt. This was particularly the case at depository institutions (which reported very few refinancings) and was least likely to be the case at independent finance companies, since more than half reported that over one-fourth of their second mortgage loan extensions represented refinancing of existing debt. Most mortgage bankers and finance company subsidiaries of bank holding companies refinanced a modest amount of second mortgage debt (over half of each group reported refinancings equal to more than ten percent of their new loan extensions).

Growth in second mortgage loan holdings varied widely. Some small, relatively new companies grew at extraordinarily high rates. Some other companies reduced their second mortgage loan holdings during the year. One mortgage bank evidently sold most of its portfolio. Median rates of growth in loan outstandings were highest at finance company affiliates of bank holding companies and lowest at mortgage bankers. Finance companies experienced the lowest growth in the number of loans held, but substantial increases in average loan size allowed most of them to expand their second mortgage loan holdings significantly over the year. In general, all companies reported larger average loan sizes, but finance companies (of all types) recorded the largest gains. This obviously reflected the fact that new second mortgage loans made by finance companies were substantially larger than the loans they already held in their portfolios.

TABLE 10

ASSORTED COMPARATIVE STATISTICS BY TYPE OF LENDER, 1979

	Independent Finance Companies*	Bank-Affiliated Finance Companies	Commercial Banks and Thrift Institutions	Mortgage Bankers
New money component of loan extensions (%)				
Low	30.6%	8.1%	87.4%	33.2%
High	100.0	100.0	100.0	100.0
Median	74.4	89.4	98.7	88.9
Year-to-year growth				
In dollar value of net receivables (%)				
Low	-12.1	12.3	-14.8	-99.8
High	219.0	1712.0	160.0	61.5
Median	28.5	69.8	49.9	15.9
In number of loans (%)				
Low	-30.8	-29.2	-6.4	9.9
High	99.6	728.3	144.6	128.3
Median	10.8	40.0	54.0	27.0
In average net loan size (%)				
Low	-2.2	-18.3	-1.9	-33.1
High	+51.1	+115.5	12.8	+28.1
Median	+17.1	+13.6	+8.1	+1.2
Number of respondents	25	13	8	8

*This category included a small number of subsidiaries of non-banking firms--but they are not associated with banks in any way.

IV. Comparison of Bank Affiliated and Other Finance Companies

Often proposed acquisitions of finance companies by commercial bank holding companies are justified with arguments that such acquisitions will reduce the finance companies' costs of funds which they can, in turn, pass on in the form of lower interest rates or better service. However, the theory of competitive markets suggests that lenders that offer identical products will set identical prices.

Since numerous data on loan terms, profitability and costs of funds were available in the CRC-NSMA survey, it provides a useful body of data to investigate whether or not bank affiliated finance companies behave differently from other finance companies. Table 11 presents average values for a number of pertinent financial characteristics, as well as results of statistical tests for differences in those characteristics. In order to reduce the effect of incorrect data on those calculations, all data that fell outside the "acceptable range" given for each characteristic were ignored.

The 1979 data presented in Table 11 indicate that average costs of funds for both bank-affiliated and independent finance companies were essentially identical. There are, however, some differences in the types of loans made by each type of company. In particular, the average maturity of new second mortgages made by bank-affiliated finance companies was significantly longer than the average maturity of new loans made by independent finance companies. Relatedly, bank-affiliated finance companies made somewhat larger loans with more lenient loan/equity requirements; however, those differences were not statistically significant. Further, as is often the case with larger, longer-maturity

TABLE 11

COMPARISON OF BANK-AFFILIATED AND OTHER FINANCE COMPANIES' LOAN TERMS, 1979

	Mean Values (Number of Respondents)		
Characteristic (acceptable range*)	Bank Affiliated Finance Companies (Number)	Other Finance Companies (Number)	T-test for Significant Differences in Mean Values
Cost of funds (1 - 30%)	10.45% (14)	10.52% (15)	- .07
Maturity	89.1 mo.	65.7 mo.	+2.05**
Maximum loan to equity (%)	78.6% (11)	73.9% (16)	+1.31
Household loan size (New loans)	$12,333 (12)	$10,068 (17)	+1.09
Interest return (2 - 40%)	15.48% (7)	17.34% (10)	- .58
Return on equity (1 - 100%)	33.67% (5)	25.84% (8)	+ .82

*Any responses outside this range were ignored.

**Significantly different at the ten percent confidence level.

loans, the bank-affiliated respondents appeared to earn lower average interest returns on their second mortgage receivables outstanding but, once again, the difference was not statistically significant. In the final comparison of Table 11, returns on equity are compared for the two types of finance company. Again, no significant difference in returns existed--a result that is consistent with our previous finding that median rates of return on equity were practically identical for each group.

Overall, then, the only significant difference that could be found in the behavior of bank-affiliated versus independent finance companies, was a tendency for the bank-affiliated companies to make longer-maturity loans. A different product mix could have contributed to this result, but insufficient evidence exists to make any further generalizations.

V. Estimated Liquidation Rates

The contractual maturities of second mortgages are relatively long, averaging well over six years. However, available evidence indicates that a substantial percentage (at least ten percent at most lenders) are refinanced in any given year. Still more may be liquidated prior to maturity. Thus, the actual maturity of second mortgages may vary from their stated maturity, and any such variation will affect the actual cash flows generated by second mortgage portfolios.

Many individuals wish to know what the cash flow experience of second mortgage holders is likely to be. While such data were not collected in this survey, rough estimates can be made of the cash flow experience of different second mortgage holders.

The estimation is imprecise because different lenders keep their accounts in different ways. Thus, two alternatives are presented for each lender.

The first step in the estimation of cash flows is to estimate second mortgage liquidation rates. This can be done by noting that the change in second mortgages outstanding (ΔO) over a period equals the difference between second mortgage extensions (E) and second mortgage liquidations (L). Thus,

(1) $\Delta O = E - L$, or

(2) $L = E - \Delta O$, where

L = liquidations during the period

ΔO = the change in outstandings during the period, and

E = new credit extensions during the period.

The liquidation rate equals the percentage of second mortgage outstandings at the start of the period (O_{-1}) that were liquidated during the period in question, or

(3) $LR = L/O_{-1}$, where

LR = the liquidation rate and

O_{-1} = outstandings at the start of the period.

Imprecision is introduced into estimates of the liquidation rate for several reasons. First, liquidations are estimated from credit extensions and outstandings. If extensions should be overestimated by, perhaps, the inclusion of unearned finance charges, liquidations will be also. While it is possible to adjust outstandings by the amount of unearned finance charges contained in them, no similar adjustment could be made for extensions. As a result, it was necessary to make two estimates of the liquidation rate. One estimate assumed that all data included unearned finance charges; the other did not.

Second, credit extensions are increased by refinancings of existing debt. In that case, the new cash outflow is less than the full amount of debt originated. Similarly, the net cash inflow is less than the face value of debt contracts liquidated. Provided that a company reports accurate data on its loan refinancings, it is possible to estimate the proportion of loan liquidations that represent cash liquidations rather than accounting liquidations.

Table 12 summarizes available data on second mortgage liquidation rates. The first row presents data on the ratio of liquidations to gross loans outstanding at the end of the previous year. The data in row 1 underestimate second mortgage liquidation rates for those firms that reported loan extensions net of unearned finance charges. Row 2 presents data based on ratios of liquidations to net loan balances outstanding at the end of the previous year. The data in row 2 overestimate liquidation rates for those firms that reported loan extensions with unearned financed charges included. Because of these biases in the data, it is possible only to note that the median liquidation rate is likely to lie between the values given in rows one and two.

Overall, the data presented in rows one and two of Table 12 suggest that between one-third and one-half of all second mortgage balances outstanding are liquidated each year. If ten percent of outstandings are liquidated through refinancings, then one-fourth to two-fifths of all second mortgage balances are liquidated with cash inflows. These are only rough approximations, of course. Some of the data on which the estimates were based are questionable, particularly since it was not possible to ascertain if credit extensions included unearned finance charges.

TABLE 12

ESTIMATED LIQUIDATION RATES FOR SECOND MORTGAGE PORTFOLIOS, 1979

	Low	High	Median	Mid-Range 50 Percent	Number of (Good) Observations
Row 1: Liquidation ratios based on ratios of repayments to gross loans outstanding at end of previous year.	9.89%*	91.71*	36.10	28-51%	39 (27)*
Row 2: Liquidation ratios based on ratios of repayments to net loans outstanding at end of previous year	17.39**	85.77**	50.07	33-63%	41 (30)**
Cash repayment rates (repayment rates net of refinancings)					
Row 3: Based on net outstandings	17.30%***	98.60%***	32.0%	24.5-41.7%	23 (18)***
Row 4: Based on gross outstandings	2.10%****	44.07%****	19.8%	10.2-31.7%	21 (15)****

*Four values over 100 percent and eight values below 0 percent were deleted.

**Ten values above 100 percent and one value below zero were deleted.

***Three observations over 100 percent and two below 0 percent were ignored.

****One observation above 100 percent and five below 0 percent were ignored.

Because a substantial proportion of second mortgage loans appear to be refinanced prior to maturity, it is useful to adjust repayment ratios for the amount of refinancings. In that way, more precise estimates can be made of the cash repayment experience for various lenders' second mortgage loan portfolios than shown in the first two rows. Row three of Table 12 presents data based on the assumption that all data on credit extensions and outstandings are net of unearned finance charges. Row four of Table 12 presents data based on the assumption that all data contain unearned finance charges. Row three overstates repayment rates for companies that include unearned finance charges in their loan extensions figures. Row four understates repayment rates for companies that exclude unearned finance charges from their loan extensions figures. Based on the data presented in row three, it appears that most companies receive cash repayments each year that equal one-fourth to two-fifths of their second mortgage loans outstanding at the end of the previous year. The data in row four suggest that cash repayments at most companies range between one-tenth and one-third of their second mortgage loans outstanding at the end of the previous year.

VI. Conclusions

The data obtained in the 1980 CRC-NSMA survey of second mortgage lenders indicates that the second mortgage market grew rapidly throughout 1979. New companies entered the second mortgage markets and existing companies expanded rapidly. Internal expansion was fueled approximately equally by growth in the number of loans outstanding and growth in the average size of second mortgage loans outstanding.

Growth in the second mortgage loan market was facilitated by low rates of foreclosure, delinquency, and chargeoff on consumer loan portfolios. Low losses, coupled with average yields that substantially exceeded lenders' costs of funds allowed most second mortgage lenders to earn attractive returns on their receivables outstanding and highly profitable (20%+) pretax returns on equity.

Considerable variation existed in the financial characteristics and loan characteristics of different types of second mortgage lenders. However, with only limited exceptions, bank affiliated and independent finance companies had similar characteristics.

Liquidation rates and refinancings of second mortgage loans were relatively high. This means that cash flows from portfolios of second mortgages typically are much faster than might be expected if one only looked at second mortgages' contractual maturities.

Calculation of numerous useful statistics were hindered by the fact that only limited amounts of reliable data were available in many cases. Major data problems are discussed in Appendix B.

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1980 Questionnaire

APPENDIX A

NATIONAL SECOND MORTGAGE ASSOCIATION
in cooperation with
CREDIT RESEARCH CENTER, PURDUE UNIVERSITY

FINANCIAL QUESTIONNAIRE

Identifying number of firm:
(Assigned by NSMA) ___ ___ ___ ___
03 04 05 06

Type of Firm (check one)

- ☐ 1. Independent Finance Company
- ☐ 2. Independent Mortgage Banker
- ☐ 3. Commercial Bank
- ☐ 4. Finance Company Affiliate of Commerical Bank Holding Company
- ☐ 5. Mortgage Banking Affiliate of Commercial Bank Holding Company
- ☐ 6. Other Affiliate of Commercial Bank Holding Company
- ☐ 7. Other ________________ (Describe)

(07)

This questionnaire applies to entities engaged in making loans secured principally by junior liens on real property.

Complete questionnaire and send in the enclosed, self addressed envelope by to:

Dr. Richard L. Peterson
Senior Research Scholar
Credit Research Center
Krannert Graduate School of Management
Purdue University
West Lafayette, Indiana 47907

The responses to the questionnaires will be summarized by the staff of the Credit Research Center under the direction of Dr. Peterson and will remain confidential. Results will be reported to participants in a composit format.

Any questions regarding the completion of this questionnaire should be directed to Dr. Peterson at the above address or by telephone (317) 494-6173.

NSMA QUESTIONNAIRE

Instructions:

1. In answering the questionnaire, show dollar figures to the nearest $1,000.
2. See definitions at the end of the questionnaire. (Definitions follow Question 23).

The following information is for the fiscal year ended ________________ (specify date) (08-13).

I. Volume indicators (for Second Mortgage Lending)

	Number	Amount (in $1,000's)
1.(a) Net loans receivable outstanding and owned at end of fiscal year	(14-20)	(21-27)
plus (b) (If available), related unearned income	xxxxxxxxxx	(28-34)
equal (c) (If available) gross loans receivable outstanding and owned at end of fiscal year	xxxxxxxxxx	(35-41)
2. Net loans receivable outstanding that were serviced, but not owned, at end of fiscal year.	(42-49)	(50-56)

3. Volume of loans originated during the fiscal year

Number of Accounts	Net Balances Renewed (in $1,000's)	New Money (in $1,000's)	Total Originations (in $1,000's)
(57-63)	(64-70)	(71-77)	Card 2: (08-14)

4. Volume of loans purchased during the fiscal year.	(15-21)	(22-28)
5. Volume of loans sold to other than affiliated company during the fiscal year	(29-35)	(36-42)
6. Average net loans receivable (based on average amount of receivables outstanding at beginning of each month ☐ (43), each quarter ☐ (43), or ☐ beginning and end of year--check one)	xxxxxxxxxx	(44-50)

NSMA QUESTIONNAIRE

II. Sources of funds and profitability

	Applicable to Second Mort- gages only	Applicable to full Portfolio
7. Average borrowings during fiscal year (Based on average debt outstanding at beginning of each month ☐ (51) or each quarter ☐ (51) -- check one)	(52-58)	(59-65)
8. Average stockholders' equity during fiscal year (Based on average equity outstanding at beginning of each month ☐ (66) or each quarter ☐ (66) -- check one)	(67-78)	Card 3: (08-14)
9. Interest expense for the fiscal year	(15-21)	(22-28)
10. Gross revenue for the fiscal year	(29-35)	(36-42)
a. Gross interest income	(43-48)	(49-54)
b. Mortgage servicing fee income	(55-60)	(61-66)
c. Origination fee on loans acquired for own account	(67-72)	(73-78)
d. Brokerage fee on loans held by others	(Card 4: 08-13)	(14-19)
e. Other fee income	(20-25)	(26-31)
f. Insurance and other non-fee revenue	(32-37)	(38-43)
11. Income before income taxes for the fiscal year	(44-50)	(51-56)

MEMO:

12. If any answers for 1. - 11. above applied to your full portfolio but not specifically to just your second mortgage loans, please estimate the percentage of your reported outstandings that consist of second mortgage loans. ______ % (57-59)

III. Operating policies

These data should be reported for the quarter ending with the end of the fiscal year shown on the previous page. The data reported should relate to originated loans only, not purchased loans.

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NSMA QUESTIONNAIRE

	Number	Volume (in $1,000's)
13. Number and dollar volume of loans originated for personal, family, or household purposes during quarter.	(60-64)	(65-71)
14. Number and dollar volume of loans originated for other than consumer purposes	(72-77)	Card 5 : (08-14)
15. Number and total dollar volume of loans originated during the quarter (should be equal to sum of #13 and #14)	(15-21)	(22-28)

16. With respect to consumer loans:

a. Average ratio of loan to appraised equity: ______ % (29-35)

b. Average maturity: ______ months (36-42)

IV. Contractual Delinquencies and Charge-offs

17. Contractual Analysis (Based on terms in effect at statement date and applicable to precompute, add-on, discount, and interest bearing accounts)

	Number	Unpaid balances (in $1,000's)	% of related receivables outstanding
Accounts current and with instalments past due less than 60 days from due date	(43-49)	(50-56)	(57-60)
Accounts past due: 60 - 89 days	(61-67)	(68-74)	Card 6 : (08-11)
Accounts past due: 90-179 days	(12-18)	(19-25)	(26-32)
Accounts past due: 180-269 days	(33-39)	(40-46)	(47-53)
Accounts past due: 270 days or more	(54-60)	(61-67)	(68-74)
Total	Card 7 : (08-14)	(15-21)	(22-28)

18. Do reported delinquent balances include unearned finance charges?

☐ Yes (29)   ☐ No (29)

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NSMA QUESTIONNAIRE

19.a. What portion of a full payment must be received in order that the payment be recognized as received in making the computation above? If less than 100% of full payment required, would this be true on consecutive payments or limited to just the most recent?

____

b. How many consecutive full payments must be received for the purpose of taking an account off the contractual list? ______________

Amount (in $1,000's)

20. Foreclosures consummated during the fiscal year

a. Number ________ (36-42)   b. Unpaid dollar balances on loans foreclosed ________ (43-49)

21. Gross charge-offs during fiscal year ________ (50-56)

22. Recoveries during fiscal year ________ (57-63)

23. Allowance for possible loan losses at end of fiscal year ________ (64-70)

THANK YOU FOR YOUR COOPERATION. Comments and suggestions for improvement are welcome.

Definitions

Period - most recent fiscal year.

Net loans receivable - gross loans receivable less related unearned income.

(If available) - report related unearned income and gross loans receivable also.

Volume of new loans - gross loans receivable originated and purchased during period less related unearned income.

New money - amount of new money disbursed.

Net balances renewed - preexisting balances refinanced.

Average net loans receivable - sum of net loans receivable outstanding at beginning of each month (or quarter) during period divided by number of months (or quarters) in the fiscal year.

Average borrowings - sum of total borrowings outstanding at beginning of each month (or quarter) during period divided by number of months (or quarters) in the fiscal year.

Average stockholders equity - sum of stockholders' equity at beginning of each month (or quarter) during period divided by number of months (or quarters) in the fiscal year.

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NSMA QUESTIONNAIRE

Previous Year's Data

So we can better measure growth in loan volume and outstandings, please complete this page with data from your 1978 fiscal year.

The following information is for the fiscal year ended ____________________ (specify date).

(This should be the year preceding the fiscal year to which all previous data pertain.)

I. Volume indicators (for Second Mortgage Lending)

	Number	Amount (in $1,000's)
1.(a) Net loans receivable outstanding and owned at end of fiscal year	Card 8: (14-20)	(21-27)
plus (b) (If available), related unearned income	xxxxxxxxxx	(28-34)
equal (c) (If available) gross loans receivable outstanding and owned at end of fiscal year	xxxxxxxxxx	(35-41)
2. Net loans receivable outstanding that were serviced, but not owned, at end of fiscal year.	(42-49)	(50-56)

3. Volume of loans originated during the fiscal year

Number of Accounts	Net Balances Renewed (in $1,000's)	New Money (in $1,000's)	Total Originations (in $1,000's)
(57-63)	(64-70)	(71-77)	Card 9: (08-14)

4. Volume of loans purchased during the fiscal year.	(15-21)	(22-28)
5. Volume of loans sold to other than affiliated company during the fiscal year	(29-35)	(36-42)
6. Average net loans receivable (based on average amount of receivables outstanding at beginning of each month ☐ (43), each quarter ☐ (43), or ☐ beginning and end of year--check one)	xxxxxxxxxx	(44-50)

APPENDIX B

TECHNICAL PROBLEMS WITH NATIONAL SECOND MORTGAGE ASSOCIATION DATA, 1980

Severe difficulties were encountered in analyzing the 1980 NSMA data reported by respondents:

(1) Firms reported data in dollar amounts, rather than in $1,000 units, as requested. Even worse, sometimes firms reported in $1,000s and sometimes they reported in dollars. This often created unbelievable ratios of, for instance, delinquencies or losses to average receivables.

These problems could be eliminated if _all_ data were reported in dollar amounts. That way, we could be sure that all data were reported consistently.

(2) Often firms reported data that applied to their full portfolio rather than to their second mortgage holdings, _per se_. This generated some incredible findings--such as delinquency ratios equalling more than 100 percent of second mortgage outstandings, or loss reserves equal to 70 percent of outstandings. Where obvious, such numbers were eliminated from calculations of all group means. However, some smaller discrepancies of this sort may have gone undetected. This problem could be solved if _only_ data applicable to second mortgages were reported.

(3) Sometimes firms reported data applicable to their whole portfolio, prorated to apply to second mortgages. Where their portfolios consisted largely of second mortgages, this did not cause problems. However, where they did not, this procedure generated erroneous data--such as delinquency rates that were too high.

(4) Firms sometimes reported data that were averaged on a different basis. As a result, comparisons between two types of data (such as average borrowings and average receivables) often gave unlikely results. More seriously, it appeared that many firms merged operating data from different parts of their operations. Thus, in some cases, even if operating statistics referred to second mortgages, delinquency or loss data might not. The solution to this is to take great care to ensure that all reported data apply strictly to second mortgages. Any data that do not apply to second mortgages should be clearly marked. While such data can be useful for calculating various operating ratios, making clear distinctions will allow us to determine better how the characteristics of second mortgage holdings (including delinquency rates, etc.) differ from other credit operations.

(5) Because it was not possible to discern if credit extensions data included unearned finance charges, it was not possible to obtain accurate estimates of credit liquidations and cash repayments.

PUBLICATIONS
CREDIT RESEARCH CENTER

MONOGRAPH No. 1: An Empirical Analysis of Retail Revolving Credit

MONOGRAPH No. 2: Credit Policies and Store Locations in Arkansas Border Cities: Merchant Reactions to a Ten Percent Finance Charge Ceiling

MONOGRAPH No. 3: Research Topics in Mortgage Markets: Proceedings of a Seminar

MONOGRAPH No. 4: An Economic Report on Consumer Lending in Texas

MONOGRAPH No. 5: Mortgage Banking 1963 to 1972: A Financial Intermediary in Transition

MONOGRAPH No. 6: A Thesaurus of Terms in Mortgage and Consumer Credit

MONOGRAPH No. 7: A Bibliography of Consumer Financial Services and Regulation

MONOGRAPH No. 8: A Compilation of Federal and State Laws Regulating Consumer Financial Services

MONOGRAPH No. 10: The Impact of Regulation on the Provision of Consumer Financial Services by Depository Institutions: Research Backgrounds and Needs

MONOGRAPH No. 12: Cost/Benefit Analysis of Creditors' Remedies

MONOGRAPH No. 13: Consumer Perception of Credit Insurance on Retail Purchases

MONOGRAPH No. 14: An Economic Analysis of the "Due On Sale" Clause in the California Mortgage Market

MONOGRAPH No. 15: Credit Unions: CRC 1979 Creditors Survey

MONOGRAPH No. 16: Savings and Loan Associations: CRC 1979 Creditors Survey

MONOGRAPH No. 17: Commercial Banks: CRC 1979 Creditors Survey

MONOGRAPH No. 18: Consumer Finance Companies: CRC 1979 Creditors Survey

WORKING PAPER No. 1: The Use of Department Store Revolving Credit: Account Use Patterns, Customer Profitability, the Value of Revolving Credit, and the Probable Incidence of Credit Rationing

WORKING PAPER No. 2: EFTS and Consumer Credit (Revised)

WORKING PAPER No. 3: The Impact of General Credit Restraint on Consumer Instalment Credit Flows

WORKING PAPER No. 4: The Effect of Alternative Billing Methods Upon Retail Revolving Credit Yields

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WORKING PAPER NO. 40

Impact of a Ten Percent Usury Ceiling: Empirical Evidence

1981

Krannert Graduate School of Management – Purdue University

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IMPACT OF A TEN PERCENT USURY CEILING:

EMPIRICAL EVIDENCE

Richard L. Peterson and Gregory A. Falls*

Abstract

Arkansas provides an excellent case study of the effects that restrictive rate ceilings have on consumer financial markets. The Arkansas ten percent usury law is the most restrictive in the nation, and it has been in force long enough for its effects to be fully realized. Thus, this study analyzes the behavior of consumers and creditors in Arkansas to determine how, if at all, their behavior differed from that of consumers and creditors located in other states.

The empirical tests of this paper were based on comparisons between the behavior of consumers and creditors in Arkansas and the behavior of consumers and creditors in states with higher rate ceilings. Some surprising results were found. For instance, while loan terms were generally more restrictive in Arkansas, this was not always the case. Loan sizes were larger and maturities shorter, but downpayment requirements were not significantly different in Arkansas than in states with less restrictive ceilings. In addition, while a higher percentage of Arkansas consumers reported being rejected for credit, many Arkansas creditors reported relatively low credit rejection rates--possible because rejected consumers shopped fewer sources for credit in Arkansas due to low, or

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zero, variations in rates. Also, in spite of the fact that a higher percentage of consumers in Arkansas reported past credit rejections, overall, Arkansas consumers had acquired just as much debt as residents of other states. They were able to obtain the same amount of credit because, even though they held significantly less cash credit, they held significantly more credit originated at the point-of-sale (by dealers or credit-card issuers).

The structure of the Arkansas credit market was affected by the usury law. Small loan credit was not readily available because consumer finance companies had discontinued operations, and banks and credit unions often refused to make small loans. As a result, Arkansas pawnbrokers proliferated. In addition, consumers, particularly high-risk consumers, more frequently used credit originated by retail dealers. Dealers, in turn, sold their credit paper on less advantageous terms to creditors than was the case in other states. Presumably, they could afford to do so only by raising prices of retail goods. However, data obtained in this study were not adequate to determine if prices of credit-related durable goods were higher in Arkansas than elsewhere.

IMPACT OF A TEN PERCENT USURY CEILING:
EMPIRICAL EVIDENCE

Richard L. Peterson and Gregory A. Falls*

I. Introduction

Much has been written on the potential effects that rate ceilings have on consumer credit markets.[1] In addition, numerous empirical studies have analyzed the impact of rate ceilings on mortgage loans and housing construction markets.[2] However, the empirical impact that loan rate ceilings have on consumer financial markets in general has not been well documented. Such documentation is needed, however, because most theoretical models of consumer loan markets cannot predict with certainty the precise consequences of restrictive rate ceilings.

A major problem involved in documenting the effect of restrictive rate ceilings on consumer financial markets is that possible effects are highly diverse. There are many margins of adjustment along which both creditors and consumers can adjust their behavior in response to rate ceilings. Thus, even though potential margins of adjustment can be specified theoretically, an empirical investigation is needed to determine what the actual effects of consumer credit rate ceilings are likely to be.

This study tests various theoretical propositions by comparing the behavior of consumers and creditors located in Arkansas which, at the time of the survey had a nearly universal ten percent usury law, with the behavior of creditors and consumers located in states with less restrictive rate ceilings.

The data used in the study were obtained as part of an extensive study sponsored by the National Science Foundation of the impact of rate ceilings and restrictions on creditors' remedies on consumer financial markets. In the study, four well-defined local credit markets with generally similar socio-economic characteristics, but far different consumer regulations, were selected for intensive study. Those markets were: Little Rock/North Little Rock, Arkansas; Racine/Kenosha, Wisconsin; Waukegan/North Chicago, Illinois; and Lake Charles, Louisiana. In each market, interviews were conducted with nearly every bank and savings and loan association, half of all finance companies and credit unions, a sample of credit-holding retailers, and a large sample of consumers.

In total 3,572 consumers were interviewed. The sample frame called for interviews to be conducted with 1,000 consumers each in the Illinois and Wisconsin markets as those areas had the most similar socio-economic characteristics and the least similar legal environments (rate ceilings were generally high and creditors' remedies were relatively unrestricted in Illinois while the reverse was true in Wisconsin). It also called for 750 interviews to be conducted in both the Arkansas market (where the ten percent usury law severely restricted loan rates while creditors' abilities to collect on defaulted debts were relatively unrestricted) and the Louisiana market (where creditors' abilities to collect on defaulted debts were highly restrictive but consumer credit rate ceilings were generally relatively high). All interviews of both consumers and creditors were conducted in early 1979, when the Arkansas rate ceiling was substantially below rates of charge on consumer credit offered elsewhere.

The fact that data were collected simultaneously from both consumers and creditors made it possible to test various propositions from both the credit supply and credit demand side of the market. In many cases the data provided insights that otherwise would not have been available.

II. Impact of Rate Ceilings on Consumer Credit Markets

Theoretically, effects of restrictive rate ceilings on the consumer financial markets are many and diverse. Creditors can adjust to restrictive ceilings in numerous ways. Consumers also can adjust to their modified environment in a number of different ways.

A. Creditor Adjustments

The creditors' problem is to establish policies for rates, fees, credit terms, credit availability, and related product pricing that generate maximum profits. If rate ceilings prevent creditors from charging the most advantageous rate, they can make numerous possible adjustments in an attempt to earn adequate profits in spite of the rate constraint. Such adjustments can include:

(1) Adjustments in credit-related fees. Application fees, credit investigation fees, or appraisal fees (for real property) can all be adjusted in lieu of rates.

(2) Adjustments in credit availability. Credit can be denied to riskier customers, or offered only on restrictive terms that have the effect of reducing credit demanded by riskier potential borrowers. In the extreme case of credit denial, lenders who specialize in making loans to risky customers may either refocus their efforts so they lend only to low-risk customers or discontinue their operations entirely.

(3) Adjustments in credit terms. Such adjustments could include: increasing downpayment, collateral, or cosigner requirements; shortening maturities; or refusing to make loans for less than a (large) minimum size. Increasing downpayment, collateral, and cosigner requirements reduces defaults and credit collection costs. Raising minimum loan size requirements reduces loan origination and collection costs per dollar of credit extended (see Peterson [22]). Both types of policies may make it harder for low-income, high-risk potential borrowers to qualify for credit.

(4) Adjustments in terms and prices on credit-related products. Retail creditors can adjust the prices that they charge on credit-related products. Further, creditors that buy credit from retail dealers can adjust the terms on which they buy such credit to reduce their risk or increase their returns. In addition, depository institutions may impose requirements that borrowers be depositors and alter nonrate fees charged depositors or others deemed eligible to borrow at the statutory rate. For instance, bank "preferred depositor" memberships could be sold that made the member eligible for safety deposit boxes, free checking, and auto loans on terms that would not otherwise be available to the depositor. Finally, other credit-related services, such as credit insurance, possibly could be marketed at a premium price and sold as a condition for obtaining credit.

B. Consumer Adjustments

Consumers, too, can adjust to restrictive rate ceilings in various ways. They can adjust their credit use, their credit composition, or their credit search efforts.

(1) Adjustments in credit use. Consumers who find they still can obtain credit where rate ceilings are low may find it less costly relative to cash purchases than consumers in higher-rate states. Thus, they may expand their consumer credit use relative to the amount they would have have acquired at higher rates. This is particularly likely to be the case for low-risk customers who might find themselves able to pay low rates (without incurring search costs to find creditors specializing in low-risk, low-rate credit) in states with restrictive rate ceilings.

Consumers who were rationed out of the cash credit market might use less credit or seek alternative credit sources. If their transactions costs of searching for suitable credit sources exceeded the reduction in credit rates, their aggregate credit use likely would be reduced.

The aggregate impact of rate ceilings would depend on the relative importance of these two effects. If greater credit use at lower rates by qualifying customers exceeded reductions in credit use by rationed customers, total credit use might increase. Otherwise it would decrease.

(2) Adjustments in credit composition. Consumers who were rationed out of the cash credit markets might alter their sources of credit. In particular, they might seek to obtain credit from retail dealers who could mark up the price of goods to compensate for low rates of return on credit balances. Other consumers might substitute relatively cheap and flexible consumer credit for other forms of credit[3] in states where rate ceilings hold consumer credit rates down. Further, consumers may adjust the forms of credit they hold if (for instance) they cannot obtain small cash loans because of low rate ceilings.

(3) Adjustments in credit search. Consumers may search less for credit in a state with uniform rates because rate variance is low. However, more consumers in such a state may be forced to search for credit if the low rate ceiling causes credit rejection rates to rise.

III. Empirical Findings

For both consumers and creditors many avenues of adjustment to low consumer credit rate ceilings are available. Different avenues may be chosen by differently situated individuals and creditors. Thus, it is of interest to determine how creditors and (differently situated) consumers actually respond to low rate ceilings.

Creditor and consumer data collected in all four survey states in 1979 were analyzed for this study. The Arkansas ten percent rate ceiling was, by far, the most restrictive rate ceiling of all. In Wisconsin, where rate ceilings were also relatively low, average loan rates frequently approximated rates charged on similar contracts in Illinois, where rate ceilings were not highly restrictive. Thus, throughout this study, all information for Wisconsin, Illinois, and Louisiana was pooled and contrasted with equivalent information on the behavior of consumers and creditors in Arkansas.

A separate analysis of behavior in Arkansas and Louisiana was also conducted, since both are Southern states with similar cost-of-living conditions, and Louisiana provides the most extreme contrast in rate ceilings. However, because the Arkansas-Louisiana comparisons were highly similar to the more comprehensive Arkansas-"all other" comparisons, only the latter data are reported in this study.

A. The Price of Credit

Table 1 summarizes data on consumer credit rates charged in Arkansas as compared to similar rates in other states. With the exception of some rates charged by Federal credit unions (which had a nationally applicable rate ceilings of 12 percent regardless of their state of location), rates charged in Arkansas were significantly lower than rates charged in other states.

When banks were asked if they took any action in response to the rise in market interest rates that had occurred in the "past year," 21 of 24 banks outside of Arkansas reported that they had increased loan rates, while none of the Arkansas banks had done so. The evidence suggests that the Arkansas banks took other action (Table 2) to offset the effect of rising rates. Four of the seven Arkansas banks reported they they had limited credit to depositors, while others reported that they had reduced credit availability or restricted loan terms. In contrast, in other states only one of the three banks that did not raise rates, altered its consumer credit policies in response to its rising costs of funds.

Table 3 presents information on fees charged for credit evaluation and property appraisal in Arkansas versus other states. While those charges were uniformly higher in Arkansas, only credit investigation charges were significantly higher in Arkansas than in the other states.

TABLE 1

CREDIT RATES IN ARKANSAS VS. CREDIT RATES IN OTHER SURVEY STATES (WISCONSIN, ILLINOIS, LOUISIANA)

Commercial Banks: Most Likely Rate

Loan Type	AR	Other States	t-Value
36 month new car	10.07	10.95	7.98*
36 month used car	10.07	12.44	12.25*
48 month new car	10.00	11.52	14.35*
48 month used car	10.00	11.94	8.87*
12 month, $1000, uns. personal	10.07	14.13	10.63*
24 month, $2000, uns. personal	10.07	13.65	11.71*
24 month, $2000, secured	10.08	13.58	8.69*
First mort. 10-19% down	9.75	10.50	.98
First mort. 20-29% down	10.06	10.33	1.26
Savings and Loan Associations: Most Likely Rate			
First mort. 10-19% down	9.50	10.62	4.31*
First mort. 20-29% down	9.70	10.38	3.95*
State Credit Unions: Most Likely Rate			
36 month new car	10.00	11.10	4.10*
36 month used car	10.00	11.68	8.69*
48 month new car	10.00	11.48	6.63*
48 month used car	10.00	11.92	24.00*
12 month, $1000 uns. personal	10.18	11.92	9.24*
24 month, $2000, uns.secured	10.25	11.74	4.08*
Federal Credit Union: Most Likely Rate			
36 month new car	10.78	11.15	.76
36 month used car	11.28	11.73	.89
48 month new car	10.70	11.12	.60
48 month used car	12.00	11.60	-1.00
12 month, $1000, uns. personal	11.77	11.86	.34
24 month, $2000, uns. personal	12.00	11.85	-1.00
24 month, $2000, secured	12.00	11.70	-1.53

TABLE 1 (continued)

Indirect Auto Credit (Creditor Rate)

Loan Type	AR	Other States	t-Value
Commercial banks - 36 mo. new car	10.16	10.80	1.84*
Commercial banks - 24 mo. used car	10.16	11.82	2.47*
Auto finance companies - 36 mo. used car	10.00	12.71	N.A.
Rates Reported by Consumers			
Main family car	9.99	10.78	4.45*
First mentioned durable good	9.98	14.27	6.66*
First mentioned hobby & recreation credit	10.35	12.24	2.65*
First mentioned home improvement credit	9.61	10.85	3.95*
"Other" credit (first mention)**	9.30	12.23	8.51*

*Significantly different at the 10 percent confidence level.

**Includes student loans at subsidized rates.

SOURCE: CRC 1979 Consumer Financial Survey and CRC 1979 Creditors Surveys (see Footnote 4).

TABLE 2

COMMERCIAL BANK ADJUSTMENTS TO RISING MARKET RATES

			Did not Raise Rates	
	Raised Rates	Did not Raise Rates	And Did Nothing Else	But Took Other Action
Arkansas Banks	0	7	1	6
Other Survey Banks	21	3	2	1

SOURCE: Peterson and Hancock [26].

TABLE 3

FEES AND CHARGES

Mortgage Credit Fees	Average AR	Average Other	t-Value
Commercial banks			
Appraisal Fees	$88.33	$62.52	1.60
Credit investigation fees	23.33	11.57	2.83*
Savings and loan Associations			
	$87.50	$71.66	0.99
	18.33	10.35	1.22

Bank Check Charges

Minimum Balance	Group Means AR	Group Means Other	Group Variance AR	Group Variance Other	t-Value
0-99 dollars	4.21	.77	1.23	2.44	5.43*
100-199 dollars	3.10	1.90	1.76	1.57	1.96*
200-299 dollars	1.74	1.06	1.15	1.04	1.99*
300+ dollars	.80	0	1.70	0	2.35*

Bank Check Overdraft Charges (Average Value)

AR	Other	t-Value
$6.21	4.81	1.97*

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*Significantly different at the 10 percent confidence level.

SOURCE: CRC 1979 Creditors Surveys

Statistical tests of data on deposit charges compiled by Sullivan [32] were constructed to determine if banks charged their depositors more to use their checking accounts in Arkansas than in other states (Table 3). Charges for the use of checking accounts and for check overdrafts were significantly higher in Arkansas than they were in other states. When one considers that Peterson and Hancock [26] found that banks frequently limited consumer credit to depositors in Arkansas, in lieu of raising loan rates, it makes sense that Arkansas banks charged higher fees on their deposits. In that way they could realize profitable revenues from their joint product activities--deposit services and loans--in spite of the fact that their charges on loans, *per se*, were limited.

Credit insurance can provide creditors with additional revenues and reduce potential losses to some degree. If credit insurance were profitable, one would expect creditors to offer it. However, rate ceilings permitting, it can either be priced *explicitly* or offered "free" by incorporating its cost in the finance charge. If rate ceilings are restrictive, one would expect credit insurance to be less frequently offered "free." Also, if rate ceilings were restrictive, and required insurance did not constitute a violation of the rate ceiling (even though, under Regulation Z it was included in the A.P.R.) one might expect creditors to "require" credit insurance more frequently. Thus, one might expect to find credit insurance to be "free" less often and "required" more frequently in Arkansas than in other states.

Table 4 presents data on consumer use of credit insurance and on consumers' perceptions of creditors' marketing practices. The data in Part I refer to consumers' most recent credit acquisitions of $200 or more. The data in Part II refer to reports by the (three) major auto finance companies.

The data in Part IA of Table 4 indicate that fewer consumers report that they have credit insurance in Arkansas than in the other survey states. The data in Part IB indicate that this is so primarily because credit union borrowers are significantly less likely to have credit insurance in Arkansas than elsewhere. That fact, plus the fact that store and dealer credit (where insurance is infrequently acquired) is much more important as a source of credit in Arkansas, seems to account for the reduced overall credit insurance usage in Arkansas that is documented in Part IA.

Parts IC and ID of Table 4 address credit insurance marketing practices. The chi-squared statistic of part IC indicates that credit insurance is marketed differently in Arkansas than in the other survey states. From inspection of percentage differences in individual responses, it appears that the greatest percentage discrepancies were the following: (1) credit insurance was "recommended" less frequently in Arkansas, (2) credit insurance was "required" more frequently in Arkansas, and (3) credit insurance was offered "free" less frequently in Arkansas. The last two findings are consistent with our expectations. However, when the relative incidence of "free" versus "required" insurance in Arkansas was compared to other survey states in Part ID, the x^2 statistic was not significant.

Finally, Part II of Table 4 indicates that credit contracts purchased by auto finance companies were much more likely to include credit insurance in Arkansas than in other survey states. Because there were so few companies, however, reasonable tests of significance could not be constructed.

TABLE 4

CREDIT INSURANCE USAGE

I. On Most Recent Credit Acquisition of $200 or More

	Residents of: AR	Residents of: Other States	x^2(for Yes/No Difference)	Absolute Percentage Difference (high/low value x 100)
A. Had insurance	62.3	72.2	11.670*	

B. Source of Credit (and% of consumers with insurance)

	AR	Other	x^2(for Yes/No response distribution)
Store or dealer	47.0%	53.6%	0.837
Bank	63.4	69.4	1.711
Finance company	77.2	73.8	0.268
Credit union	71.8	86.9	6.131*

C. Insurance was

	AR	Other	x^2(for difference in distributions)	Absolute Percentage Difference (high/low value x 100)
Never mentioned	24.8%	21.2%		17.0%
Mentioned, low key	18.0	15.2		18.4
Recommended	24.8	33.6		35.5
Strongly recommended	8.1	8.8		8.6
Required	15.8	12.0		31.7
Free	6.8	8.3		22.1
Other	1.6	0.7	14.247*	128.6

D. Number reporting "free" versus "required" insurance

	AR	Other	x^2(for free vs. required distribution)
Free	22	91	
Required	51	132	2.653**

II. Auto Finance Company Paper, Percent of Contracts with Credit Life Insurance

AR	Other
67.5	36.1

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*Significantly different at the 10 percent confidence level.

**P = .1034

SOURCE: CRC 1979 Consumer Financial Survey and CRC 1979 Creditors Survey

B. Credit Availability and Restrictions on Credit Terms

Creditors can change credit terms to alter their risk and losses. Restrictions in credit terms reduce the proportion of people who desire and can qualify for consumer credit. If rates cannot be raised, creditors can still ration credit either by rejecting higher risk borrowers or by raising downpayment requirements, shortening credit maturities, or taking other steps to reduce the number of people who qualify for and desire credit on those terms. Such changes in credit terms can be used to reduce defaults and credit collection costs.

1. Credit Terms

Table 5 summarizes available evidence on consumer credit terms. At both commercial banks and credit unions, the average minimum size personal loan that an Arkansas institution would make was two and one-half times or more the average minimum size of loan that non-Arkansas lenders would grant. This difference was highly significant for commercial banks. It reflects the fact that costs of loan origination and servicing cause net yields to fall far below contract rates on relatively small consumer loans (see Peterson [22]). If loan rates cannot be raised sufficiently so that adequate net yields can be earned after loan servicing costs are taken into account, lenders will not make small loans. The statistics suggest that, due to this phenomenon, fewer lenders were willing to make small cash loans in Arkansas than in other states.

The data in Table 5 also suggest that creditors were more likely to require cosignors on loans in Arkansas than elsewhere. While cosignor requirements may reduce loan demand, they also reduce creditors' risk, and thereby can increase the expected rate of return on fixed-rate loans

TABLE 5
CREDIT TERMS

A. Minimum Personal Loan Size Requirements

	AR	Other	t-Value (for difference in means)
Commercial banks	$1,571.52	579.54	8.24*
Credit Unions	280.56	112.86	1.19

B. Cosignors on Most Recent Loans (Consumer Data)

	AR	Other	x^2 (for Yes/No Distributions)
Family Auto Purchase	12.7%	6.7%	6.437*
"Personal" Loan	13.0%	8.0%	2.822*

C. Loan Maturities

Consumer data for	Average Loan Maturity (months)		t-Value (for difference in means)
	AR	Other	
First family car	37.36 mo.	39.07 mo.	2.27*
Second family car	35.41	37.48	1.65

Consumer data on	% of Auto Contracts with maturites over 36 mo.		
	AR	Other	x^2 (for Yes/No Distribution)
First family car	33.9%	38.3%	0.5383
Second family car	20.6%	23.5%	0.0116

Bank data on	% of Banks Making 48-month Auto Loans		
	AR	Other	x^2 (for Yes/No Distribution)
New auto loans	42.9%	87.5%	3.888*
Used auto loans	42.9%	66.7%	

Credit union data on	% of Credit Unions Making 48-month Auto Loans		
	AR	Other	x^2 (for Yes/No Distribution)
State credit union			
new car	36.4	84.0	2.143
used car	18.2	48.4	1.948
Federal credit union			
new car	55.6	55.6	
used car	22.2	33.3	

TABLE 5 (continued)

D. Loan-to-Dealer Cost Ratios

Commercial Banks

Loan to dealer cost	Group means (%)		
	AR	Other	t-value
36 month new car loan	75.83	85.21	.80
36 month used car loan	78.33	84.29	.48
48 month new car loan	87.50	85.00	-.29
48 month used car loan	90.00	77.00	-1.33
State Credit Unions			
36 month new car loan	83.50	83.18	-.09
36 month used car loan	95.71	85.13	-2.19*
48 month new car loan	83.25	83.87	.13
48 month used car loan	100.00	84.00	-4.34*
Federal Credit Unions			
36 month new car loan	82.50	78.88	-.98
36 month used car loan	91.25	90.25	-.12
48 month new car loan	86.66	79.00	-1.14
48 month used car loan	--	--	--
Auto Finance Companies			
36 month used car loan	93.1	95.9	N.A.
48 month new car loan	88.6	92.2	N.A.

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*Significantly different at the 10 percent confidence level.

SOURCE: CRC 1979 Consumer Financial Survey and CRC 1979 Creditors Survey

by reducing expected losses. Thus, it is not surprising that Arkansas creditors, who could not raise rates, more frequently sought to increase expected returns by requiring cosignors.

Creditors may also alter loan maturities to adjust loan risk. Longer maturity loans reduce current cash flows and are usually thought to be potentially more risky for the creditor--as the more distant future is less certain. Many consumers prefer longer maturity credits, however, because they reduce monthly payment requirements.

The evidence presented in Table 5 on consumer credit maturities in Arkansas and other states is mixed. Consumers reported shorter average maturities on their auto loans. Relatedly, a significantly lower percentage of banks made 48-month auto loans in Arkansas. While there was not a statistically significant difference between Arkansas and the other states in the percentage of credit unions that made auto loans of 48-months, only a very small percentage of state-chartered credit unions made such loans in Arkansas. Finally, while a lower percentage of Arkansas residents than in other states had auto loans over 36-months, the difference was not statistically significant. Thus, while the available evidence shows that auto loan maturities were lower in Arkansas than in other states, the differences were not always statistically significant.

Evidence on downpayment ratios was less consistent than evidence on loan sizes, cosigner requirements, and maturities. While auto finance companies generally made loans with more restrictive loan-to-value ratios in Arkansas than in other states, credit unions did the opposite. In addition, bank data were mixed, with Arkansas banks having more restrictive downpayment requirements on 36-month auto loans, and less restrictive downpayment requirements on 48-month auto loans. The only statistically significant results suggest that state-chartered credit unions made used car loans on more lenient terms in Arkansas. Finally, consumer data (not shown in Table 5) did not show significant differences in downpayment requirements across states. Thus, overall, the evidence does not suggest that, in general, downpayment requirements were more restrictive in Arkansas than in other states.

2. Credit Rejection Rates

Data on credit rejection rates vary according to whether consumer data or creditor data are being considered. Compared to consumers in the three other states, a much larger proportion of Arkansas consumers (28 percent vs. 16 percent) reported that they had been rejected when they applied for consumer credit at some time in the past. The difference was highly significant statistically. In addition, in Arkansas, lower percentages of consumers reported that they could get all the credit they wanted after having been either rejected or granted less credit than desired.

Creditor data did not show uniformly higher rejections for Arkansas consumers, however. On one hand, customer rejection rates at commercial banks often were significantly higher in Arkansas. Rejection rates were also higher at savings and loan associations. On the other hand, customer rejection rates reported by auto finance companies and credit unions were lower in Arkansas than in other states--albeit, they were significantly lower only at Federal credit unions (which could charge equal rates in all states).

One way that these disparate findings can be reconciled (Peterson [23]) is to assume that consumers apply less frequently for credit in Arkansas once they have been rejected for credit. This makes sense if consumers feel that once they have been rejected for ten percent credit they cannot go elsewhere to obtain credit at a higher rate. If this is true, the weak applicants would apply for credit less frequently in Arkansas. As a result creditors would reject a lower portion of applicants, even though a higher portion of the population had been rejected at least once. Another possible explanation for this disparity could be that creditors engage in more "face-screening" in Arkansas. Because credit is not readily available,they might discourage all but obviously creditworthy potential customers from even bothering to fill out a formal application. Consumers' perceptions of rejection, then, might be based on these verbal exchanges, while creditors' statistics would be based only on formal applications for credit. A third possible explanation for these findings is that Arkansas residents may have been more frequently rejected for ten percent credit in their (more risky) youth, but did not experience substantial difficulty in qualifying for ten percent credit once they aged somewhat or learned which types of creditors would be most likely to accept their credit applications. Thus, over their life cycle, a large proportion of consumers may have experienced credit rejection in Arkansas even though creditors rejected a relatively small portion of credit applicants at any point in time.

3. Credit Use

Unless consumers found ways to evade the effects of credit restriction, one would expect that the higher credit rejection rates they

TABLE 6

REJECTION RATES ON CONSUMER LOANS

	Group Mean (%)		
	AR	Other	t-Value
Rejection Rates Reported by Consumers			
All consumers (% rejected)	28.0	16.0	6.84*
Consumers that eventually received the credit they wanted after being rejected outright.			
Number rejected	11	42	
Percent receiving all the credit they wanted	27.3%	40.5%	
Consumers that eventually received all the credit they wanted after initially not receiving as much credit as desired.			
Number receiving less than they wanted	35	110	
Percent eventually obtaining all the credit they wanted	34.3%	37.3%	
Rejection Rates Reported by Credit Grantors			
Commercial Banks			
Type of loan			
New car	21.83	12.59	+1.92*
Unsecured personal loan	39.66	21.31	+2.63*
First mortgage	28.00	25.90	+ .15
Savings and Loan Associations			
First mortgages	8.33	5.80	+ .92
State Credit Unions			
New car	2.87	5.73	-1.45
Unsecured personal	3.36	7.91	-1.69
Federal Credit Unions			
New car	2.00	15.75	-3.72*
Unsecured personal	4.14	9.33	-1.54
Auto Finance Companies			
New auto financing	13.5	18.3	N.A.
Used auto financing	19.6	31.7	N.A.
Total auto financing	17.0	24.0	N.A.

*Significantly different at the 10 percent confidence level.

SOURCE: CRC 1979 Consumer Financal Survey and CRC 1979 Creditors Surveys reported could cause them to hold less debt in Arkansas than in the other states surveyed. Table 7 provides evidence on consumers' total debt holdings in column (a). Overall, the data presented in that column indicate that Arkansas residents held as much credit as consumers located in other states. In the aggregate, in fact, the total amount of consumer debt per household held by Arkansas respondents insignificantly exceeded the average amount of consumer debt held by other respondents in the sample. Further, when debt holdings were disaggregated by customer risk (as measured by a major bank's credit scoring system) and income levels, little difference in average debt holdings was apparent--with the exception that two of the three lowest income classes in Arkansas surprisingly held more debt on average than respondents with equivalent incomes in other states. Thus, overall, the data in column (a) do not support the hypothesis that credit is less readily available in Arkansas than in other credit markets--and they are particularly inconsistent with the hypothesis that low income borrowers receive less credit in Arkansas.

The other data provided in Table 7 give a somewhat different picture, however. In particular, the data in column (b) show that, if only cash credit (i.e., credit not obtained from dealers at the point of sale or on credit cards) is considered, Arkansas residents generally held significantly less credit of that sort than residents of other states. The difference is statistically significant for the lowest income borrowers and for two of the three highest-risk deciles of consumers. Thus, the evidence presented in column (b) is consistent with the hypothesis that cash credit will not be readily available--particularly to high-risk borrowers--if rate ceilings are highly restricted.

TABLE 7

TOTAL HOUSEHOLD DEBT HOLDINGS, BY RISK AND INCOME

	(a)Total Consumer Debt Outstanding (Including Credit-Card Debt) Per Household			(b)Non-point-of-Sale Consumer Debt Outstanding (Excludes Dealer-Originated & Credit Card Debt)			(c)Ratio of Point-of-Sale Credit (Including Credit Cards) To Total Consumer Debt--Average Ratio Per Household		
By Credit Risk	AR	Other	t-Value	AR	Other	t-Value	AR	Other	t-Value
Riskiest 5%	1267.00	951.13	-.99	563.28	699.54	.48	.7519	.4644	-3.19*
Next riskiest 5%	1227.52	1698.72	1.35	626.26	807.02	.71	.6226	.4145	-2.04*
Second risk decile	1645.92	1990.74	.91	652.78	1275.69	2.53*	.6862	.3905	-4.01*
Third risk decile	1587.53	1863.42	.76	591.81	1017.21	2.03*	.6483	.5079	-1.81*
Fourth risk decile	1864.98	1545.41	-.95	912.90	928.10	.05	.6861	.5834	-1.39
Fifth risk decile	2468.93	1614.65	-2.19*	935.37	887.29	-.19	.6768	.6100	-.90
Sixth risk decile	1477.73	1729.39	.67	596.88	1238.83	2.60*	.7202	.5446	-2.11*
Seventh risk decile	1288.36	1437.07	.34	535.76	877.12	1.31	.7769	.6025	-2.17*
Eighth risk decile	1246.44	1089.69	-.49	466.08	835.57	1.50	.7911	.6484	-1.76*
Ninth risk decile	1093.39	808.78	-.87	757.32	585.10	-.60	.7829	.6988	-1.05
Least risky ten percent	330.35	308.35	-.15	53.00	179.21	2.21*	.9053	.8989	-.12
By Income	AR	Other	t-Value	AR	Other	t-Value	AR	Other	t-Value
$1-$3500	148.67	150.20	.02	3.55	68.53	2.55*	.9231	.6800	-2.18*
$3501-5500	675.68	188.80	-2.75*	201.97	102.63	-.74	.8529	.7891	-.03
$5501-8250	697.65	406.67	-1.86*	345.29	203.85	-1.09	.7287	.6230	-1.25
$8251-10500	987.00	599.05	-1.65	368.87	391.12	.14	.7841	.5550	-2.56*
$10401-13250	1140.54	1230.90	.36	477.54	636.59	.90	.7524	.6070	-1.82*
$13251-18750	1974.35	1679.14	-.99	858.04	997.89	.62	.7039	.5694	-2.37*
$18751-23750	3027.86	2097.91	-1.98*	1099.26	1232.03	.44	.7030	.5464	-2.53*
$23751-27500	2419.29	2642.78	.45	667.00	1573.96	3.14*	.7610	.5467	-2.77*
Over $27500	2876.48	2664.52	-.45	1430.14	1884.61	1.35	.5657	.5574	-.12
Total	1455.71	1367.68	-0.81	605.59	848.52	3.28*	.7286	.5845	-6.22*

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*Significantly different at the 10 percent confidence level.

SOURCE: CRC 1979 Consumer Financial Survey

The disparate findings of columns (a) and (b) can be explained by the fact that consumers have shifted their credit usage toward point-of-sale sources in Arkansas. Since point-of-sale credit is initiated by dealers, they can raise prices on goods to compensate for any losses they incur on their credit operations. Thus, if cash credit is not readily available due to low rate ceilings, we expect borrowers to be able to obtain consumer credit more readily at point-of-sale credit sources. This, in fact, is what happened in Arkansas. Column (c) of Table 7 indicates that the ratio of point-of-sale credit to total consumer credit held by consumers is far higher in Arkansas than in other states. The difference is highly significant statistically, not only in total, but also for many income groups, including the lowest income group and the riskiest three deciles of the population. These results are consistent with the hypothesis that (where credit rates are limited by rate ceilings) point-of-sale credit will be substituted for cash credit by borrowers (particularly risky borrowers) who experience difficulty in obtaining cash credit.

Table 8 addresses the question of how consumers alter their credit sources because of the effect of rate ceilings. In Table 8,point-of-sale credit is separated into dealer instalment sales contracts and credit card credit. Overall, Arkansas residents used significantly more credit of each type than residents of other states. However, in relation to residents of other states, Arkansas customers in the riskiest half of the risk distribution used relatively more dealer sales credit, while Arkansas consumers in the highest-end of the income distribution had more debt outstanding on credit cards. Thus,

TABLE 8

HOUSEHOLD HOLDINGS OF POINT-OF-SALE CREDIT COMPONENTS

	(a) Dealer-Originated Consumer Instalment Debt			(b) Total Credit Card Debt		
By Credit Risk	AR	Other	t-Value	AR	Other	t-Value
Riskiest 5%	585.93	256.58	-1.76*	166.04	98.75	-1.26
Next riskiest 5%	421.62	562.26	.63	189.73	256.73	.73
Second risk decile	704.72	412.50	-1.17	252.54	240.93	- .18
Third	692.94	557.17	- .62	346.32	264.53	- .93
Fourth	803.21	424.02	-1.69*	413.95	227.24	-1.83*
Fifth	1011.53	362.67	-2.19*	490.90	366.24	-1.04
Sixth	616.88	325.07	-1.38	323.84	275.83	- .73
Seventh	330.58	278.57	- .37	341.16	295.13	- .44
Eighth	358.68	167.84	-1.24	445.04	214.24	-1.93*
Ninth	61.21	98.65	.95	279.31	201.25	- .98
Least risky 10%	161.96	0	-1.68*	160.28	150.31	- .22
Annual Income ($)						
1-3500	116.00	46.39	- .75	33.64	33.12	- .03
3501-5500	383.25	45.19	-1.96*	83.02	44.37	-1.38
5501-8250	233.29	122.76	-1.10	135.01	130.27	- .12
8251-10500	372.51	161.41	-1.39	146.34	90.88	-1.18
10501-13250	385.57	342.14	- .25	248.56	204.28	- .75
13251-18750	703.47	449.70	-1.41	378.79	268.74	-1.94*
18751-23750	1339.85	426.83	-2.79*	589.68	369.57	-2.59*
23751-27500	1020.49	576.52	-1.45	510.05	492.09	- .17
Over 27500	699.98	436.77	-1.29	855.09	430.50	-2.44*
Total	539.33	298.72	-3.86*	323.02	243.41	-2.84*

*Significantly different at the 90 percent confidence level.

SOURCE: CRC 1979 Consumer Financial Survey there was some tendency for the source of point-of-sale credit to vary differently with the risk and income of the consumer in Arkansas than in other states.

Overall, then, we found that the total amount of credit used by Arkansas consumers did not vary from that used by consumers in other states, but that the composition of consumer credit was quite different Cash credit was used less frequently and both credit card credit and dealer originated credit were used more extensively. Thus, consumers in Arkansas, particularly the riskiest consumers, used significantly higher ratios of point-of-sale credit to total credit than consumers in other states.

C. Costs of Related Goods

The greater use of point-of-sale credit relative to cash credit in Arkansas is consistent with the hypothesis that retailers can continue to sell on credit even if credit rates are low because they can increase the price of goods to offset reduced income from finance charges. In previous work, Lynch [15], [16] has found that prices of durable goods in Arkansas averaged several percentage points higher than prices on exactly the same items in major cities in surrounding states. While retailers can raise prices of goods, cash creditors cannot. However, if creditors purchase consumer paper from retailers who issue the credit at the point-of-sale they may be able to raise charges to the retailers to compensate for low interest rates. They also will purchase consumer credit contracts at lower prices (greater discounts) than equivalent contracts with higher finance rates. Retailers, in turn, can pass these on elevated charges and discounts in the form of higher prices on goods with credit sensitive demand.

Data relating to dealer-creditor relationships suggest that creditors did pass on to retailers both extra fees and risk when their interest rates were restricted (Table 9). First, merchant discounts on bank credit cards were higher in Arkansas than in other states, thereby enabling the banks to earn more than ten percent (gross) on their credit card receivables. Second, finance companies received a lower yield on auto credit contracts purchased in Arkansas than in other states. They partially compensated for that fact by eliminating the profit (dealer rate spread) that dealers usually earn by selling their contracts to auto finance companies at a premium. In addition, they apparently made the dealer absorb 100 percent of the credit risk associated with those contracts--as Arkansas was the only state in which all auto finance companies specified in their contracts that they had full recourse to recover from the dealer any credit losses on the contract. These provisions increased Arkansas auto dealers' costs of doing business as well as the risk they incurred. As a result, we hypothesize that Arkansas auto dealers raised prices on their vehicles or took steps to limit their risk on their instalment sales of automobiles.

D. The Structure of the Credit Market

When rate ceilings are restrictive, one would expect that high-risk cash creditors would leave the consumer loan market and high-risk borrowers would obtain credit at the point-of-sale. In this section, we look at the total number of creditors operating in each of the consumer credit markets surveyed to determine how the institutional structure of the credit market in Arkansas differed from other states.

TABLE 9
DEALER-CREDITOR RELATIONSHIPS

	AR	WI	IL	LA
Average Discount Paid on Bank Credit Cards	5.5%	3.3%	2.0%	3.6%
Auto Finance Companies: Rates and Rate Spreads				
48 month, new auto				
Consumer rate	10.0	12.5	13.8	14.1
Creditor rate	10.0	11.9	12.1	12.2
Dealer rate spread	0	0.6	1.7	1.9
36 month, used auto				
Consumer rate	10.0	15.16	17.62	17.61
Creditor rate	10.0	12.55	12.68	12.89
Dealer rate spread	0	2.61	4.94	4.72
Auto Finance Companies, Security Requirements				
Full recourse required?				
Yes(%)	100%	33%	33%	67%

SOURCE: CRC 1979 Consumer Financial Survey and CRC 1979 Creditors Survey

The data in Table 10 indicate that no consumer finance companies operated in Arkansas, while such companies operated in states with higher rate ceilings. Apparently, companies that traditionally serve the higher-risk end of the cash loan market could not operate profitably in a state where rate ceilings were highly restrictive.

A second interesting observation, that can be made from Table 10 is that pawnbrokers were far more prevalent in the Arkansas market than in all other credit markets combined. Pawnbrokers extend small amounts of cash credit. Further, by under-appraising the value of collateral, they can earn a profitable rate of return (on defaulted loans) even if they earn only a ten percent rate of return on pawns that are redeemed. Because of their pricing flexibility and the absence of consumer finance companies in the Arkansas market, it appears that pawnbrokers have entered the market to provide consumers with small cash loans.

In addition to pawnbroker credit, it also appears that many consumers who could not obtain small cash loans used retail credit as a source of funds (Table 7). As a result, the riskiest 30 percent of Arkansas households held significantly higher proportions of retail-originated credit.

IV. Reconciliation of Findings

The data presented in this paper indicate that the ten percent usury law has had a number of effects in Arkansas. Some of the findings were unexpected. For instance, the finding that consumers reported they were more frequently rejected for credit in Arkansas was consistent with the notion that more credit rationing occurs when rate ceilings hold down loan rates. However, the finding that

TABLE 10

STRUCTURE OF CREDIT MARKET

(Total Number of Firms of Each Type in the Market)

	AR	WI	IL	LA	Total
Commercial banks	8	14	7	5	34
Credit unions	54	34	28	21	137
Savings and loan associations	7	5	6	3	21
Consumer finance companies	0	18	13	31	62
Pawnbrokers	7	0	2*	1	10*

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*One pawnbroker in Chicago advertised in North Chicago/Waukegan, the other was a local pawnbroker.

SOURCE: CRC 1979 Creditors Surveys

consumers held as much credit in Arkansas as in other states was unexpected given the elevated rejection rates reported in Arkansas.

These potentially disparate findings can be reconciled, however, if retail creditors serve consumers who are rejected for loans by cash lenders. Retail creditors can do so by raising prices on goods to generate any given rate of return on their total (goods plus credit) operations--subject to limitations imposed by competition from retailers who do not offer credit, and other determinants of consumer demand.[5]

Table 11 indicates that a retailer can earn the same cash flow from a good that is sold at a high price on a credit contract that carries a low interest rate as on a good that is sold at a lower price, but with a higher interest rate. Thus, in states where all rates are restricted, retailers can elect to increase cash prices on goods that are typically sold on credit. Such a strategy would let them maintain their cash flows even if nominal rates of return on their credit contracts were held down by low rate ceilings.

Because retailers can adjust cash prices on credit-related goods, as well as interest rates, they generally can charge any price necessary to serve consumers of any given level of risk. Some "inner city" merchants for instance, may double cash prices and still sell goods on credit to customers who otherwise would be too risky to qualify for credit. Similarly, Arkansas merchants should be able to serve relatively risky customers if their cash prices are high enough. Thus, it is not surprising that the riskier borrowers in Arkansas were more likely to use dealer-originated credit than risky borrowers in other states.

TABLE 11

RELATIONSHIP OF INTEREST RATES, PRICES, AND RETAIL CASH FLOWS

Interest Rate	Price of Good	Maturity of Credit Contract*	Monthly Payment (Cash Inflow)*
18%	$1,000	24 mo.	$44.92
15%	$1,029.65	24 mo.	$44.92
12%	$1,060.56	24 mo.	$44.92
10%	$1,081.90	24 mo.	$44.92

*These calculations assume that all consumer credit contracts are repaid as scheduled.

The effect of raising cash prices to compensate for reduced interest revenues cannot be expected to have neutral effects on consumers, however. In particular, the cash price of goods will rise relative to the credit price. Further, credit users will have fewer incentives to repay credit quickly. While higher cash prices may discourage some sales of goods, low credit costs may encourage credit buyers to acquire and retain larger credit balances than would otherwise be the case. As a result of these two effects, consumers may purchase retail goods on credit contracts relatively more frequently and repay their debts more slowly than would be the case in states with higher rate ceilings.[6] This response could account for the fact that Arkansas residents, on average, held just as much consumer credit as residents of other states--in spite of the fact that credit rejection rates were elevated and small cash loans were rot readily available in Arkansas.

V. Conclusions

The evidence presented in this paper demonstrates that the ten percent rate ceiling in Arkansas has had a number of effects. Principal findings were that the ten percent Arkansas rate ceiling:

(i) reduced loan rates and increased some (but not all) credit related fees and charges. One of the most interesting findings here was that commercial banks evidently altered their deposit pricing policies in response to restrictive loan rate ceilings;

(ii) eliminated conventional cash creditors who serve high-risk customers from the market, and allowed pawnshops to proliferate;

(iii) caused customers in general and high-risk customers in particular to change their credit sources from cash credit to dealer-originated credit;

(iv) caused consumers to report higher credit rejection rates. However, possibly because of reduced credit search or greater "face-screening," creditors did not consistently report elevated rejection rates. Also, overall, consumers obtained as much credit per household as consumers in other states;

(v) caused some loan terms (principally minimum personal loan sizes, cosignor requirements, and loan maturities) to be restricted but did not have much, if any, effect on downpayments; and

(vi) caused creditor-dealer relationships to become more restrictive from the viewpoint of the dealer. Institutions purchased consumer instalment contracts at higher discounts in Arkansas than in other states and imposed a greater risk of credit loss on auto dealers.

Overall, the principal findings of this study suggest that consumer credit rate ceilings have a much greater effect upon the structure of the consumer credit market, the composition of consumer credit, and the terms of consumer credit contracts than they do on aggregate consumer credit use.

FOOTNOTES

[1] See, for instance, [1], [2], [3], [6], [7], [8], [9], [10], [11], [12], [15], [16], [17], [18], [19], [20], [23], [24], and [32].

[2] See [4], [21], [29], [30], [36].

[3] For instance, Peterson and Sullivan [28] found that consumers in low rate states were less likely to acquire consumer durable goods with their homes. In low rate states, a smaller percentage of consumers total mortgage debt was used to finance durable goods acquisition, and credit card credit usage was elevated relative to mortgage credit use.

[4] The CRC 1979 Consumer Financial Survey is described by Dunkelberg [5] and the CRC 1979 Creditors Surveys are described by Johnson [13], Peterson and Hancock [25], Peterson and Schallheim [27], Sullivan and Dennis [33], Sullivan and Drecnik [34], and Sullivan and Linn [35].

[5] Anecdotal evidence indicates that Arkansas retailers may adjust services as well as prices. For instance, they may charge for delivery or wrapping packages or offer less choice (fewer inventories) in their stores (see Schlendler [31]).

[6] Some anecdotal evidence reported by Schlender [31] is consistent with the notion that consumers will use credit more frequently to buy retail goods in Arkansas. A regional department store chain reported 52 percent of its sales in Arkansas were credit sales, as opposed to 45 percent of its sales in stores located in other states. Presumably, the same type of merchandise would be sold in each store, so interstate differences in credit costs accounted for the difference in credit use.

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WORKING PAPER NO. 41

Costs and Benefits of Restrictions on Creditors' Remedies

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Krannert Graduate School of Management – Purdue University

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COSTS AND BENEFITS OF RESTRICTIONS ON CREDITORS' REMEDIES

Richard L. Peterson and Gregory ~~D.~~ A. Falls*

Abstract

This paper analyzes data obtained in late 1978 and early 1979 from extensive surveys of consumers and creditors located in four states with wide differences in laws affecting legal rate ceilings and creditors' remedies. Creditors were asked a series of questions relating to their use and valuation of remedies. Consumers were asked a number of questions relating to their valuation of various remedy protections and their attitudes toward particular creditors' remedies. Consumers also were asked a set of questions relating to their past credit experience and the likelihood that they would experience payment difficulties in the future.

Among the more interesting findings of the survey were

(1) Creditors used "tough" remedies most frequently and (when possible) most quickly in states with low consumer credit rate ceilings. They were least likely to use "tough" remedies in the state with the weakest (most expensive) remedies and highest rate ceilings.

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(2) Most consumers were not willing to pay for various protections against the exercise of creditors' remedies. Even the majority of consumers who expected they might fall behind on their debts in the future were not willing to pay for protection against various remedies.

(3) Consumers' willingness to pay for various remedy protections varied with their state's legal environment. In a state with weak, infrequently used remedies, few consumers were willing to pay for remedy protections. In a state with tougher remedies, more consumers were willing to pay for protection, even though "tough" remedies did not appear to be used frequently.

(4) Consumers who had previously fallen behind on their debts showed the greatest sensitivity to actual legal environments. For instance, such consumers were less willing to pay for late charge and attorney's fee protection in a state where such fees were already restricted. Further, such consumers were uniformly most willing to pay for remedy protections in the state where "tough" remedies were most quickly and frequently used.

(5) Consumers' attitudes toward various remedies varied greatly. They generally felt late fees, repossession, phone calls, and garnishment of savings accounts were acceptable. They disliked the taking of household goods, employer contacts, deficiency judgments, and the taking of wage assignments or garnishment.

(6) Interestingly, there was surprising agreement in consumer and creditor valuation of remedies. Creditors highly valued late fees and repossession. Further, creditors placed little value on the taking of household goods. This can be explained by noting that creditors may be sensitive to the "goodwill" and market share they will lose if they exercise unpopular remedies.

(7) In general, it appears that the market will adjust to consumers' attitudes toward remedies. Creditors will not use remedies strongly disliked by consumers unless those remedies have great value to them as collection tools. If unpopular remedies have little collection value, creditors are not likely to use them. However, if creditors continue to use unpopular remedies, such as garnishment and attorney's fee clauses, the banning of such remedies through legislation may lead to welfare losses because credit availability will contract.

Studies based on NCCF data show credit availability has contracted in states where attorneys fees and garnishment have been restricted. This fact, compiled with data obtained in these studies, suggest that creditors use these remedies where they are legally available because they are highly valued as collection devices and consumers are not willing to pay much to obtain protection against their exercise.

COSTS AND BENEFITS OF RESTRICTIONS ON CREDITORS' REMEDIES

Richard L. Peterson and Gregory D. Falls

I. Overview

Many states restrict the remedies creditors may exercise to collect on delinquent and defaulted debts. In addition, various Federal provisions exist that regulate debt collection--in the form of the Federal Consumer Credit Protection Act; the Fair Debt Collection Practices Act, the Bankruptcy Reform Act of 1978, and key judicial interpretations at the Federal level. Also, the Federal Trade Commission has proposed an extensive set of restrictions on credit collection practices in its proposed Trade Regulation Rule on Credit Practices, and new proposals relating to creditors' remedies often arise in both Congress and various regulatory agencies. Thus, it is of considerable interest to assess the costs and benefits of restrictions on creditors' remedies for both creditors and consumers.

Statutory restrictions on creditors' remedies vary widely among states. Hence, it is useful to analyze the response of consumers and creditors to different states' remedy environments to determine what impact proposed restrictions might have. A number of previous studies of differences in consumer and creditor behavior in states with different remedies have been conducted. Extensive studies were conducted by the National Commission on Consumer Finance.[1] Those studies used data on the economic characteristics of the consumer credit markets to assess the impact of various statewide restrictions on creditors' remedies on consumer credit markets. In addition, the NCCF studies also collected and tabulated data from individual firms regarding their usage and assessment of the relative importance of various remedies.

Following the NCCF studies, a number of additional studies of the impact of restrictions on creditors' remedies were conducted in the mid or late 1970's. These studies were conducted after the FTC proposed its Trade Regulation Rule on credit practices. A number of studies were prepared. Those conducted by Barth and Yezer and Shay analyzed data on personal loans collected from consumer finance companies operating in different states.[2] Those conducted by Peterson and Dunkelberg analyzed surveys of creditors conducted in Wisconsin--a state with many laws similar to the proposed FTC Trade Regulation Rule.[3]

All of the most thorough NCCF and FTC-related studies were characterized by the fact that data were collected only from creditors. No attempt was made to evaluate directly consumer attitudes toward various remedies. Consequently, the studies typically encountered difficulty in directly assessing potential costs and benefits of various remedies to consumers. The studies also were unable to compare consumer valuation of various protections against the exercise of remedies with creditors' evaluations of those remedies.

This study is unique in that it (1) analyzes data obtained directly from consumers regarding their evaluation of various creditors' remedies, (2) it compares consumer attitudes toward various remedies with creditor attitudes toward specific remedies, and (3) it relates creditor use of remedies to the total economic and legal environment in which the creditors operate.

The empirical data analyzed in this study were obtained from nearly simultaneous surveys of consumers and creditors operating in well-defined local consumer credit markets in four states with substantially different laws relating to consumer loan rate ceilings and restrictions on creditors' remedies. Section II describes the data base. Following that, Section III analyzes the extent to which creditors use and value various remedies in each credit market surveyed. Creditors' use and valuation of various remedies appear to reflect the influence of particular state laws, the nature of each creditors' credit operations, and the level of legal consumer credit rate ceilings in each state.

Several major theoretical issues have been raised about consumer valuation of remedies and their use. On one hand, Johnson[4] has argued that the market will operate to provide consumers with protection against the exercise of a particular creditor remedy if consumers are more willing to pay for that protection than creditors are willing to pay to retain the remedy. On the other hand, the FTC's Bureau of Consumer Protection (BCP) and Barth and Yezer[5] have argued that consumers' knowledge of the potential burden they would bear if remedies were exercised is inadequate. Also, the BCP argued, based on Caplovitz studies,[6] that many consumer loan defaults were due to reasons beyond their control. Thus, they implicitly argued that consumers might underestimate their probabilities of experiencing credit difficulties and, therefore, underestimate the potential cost of remedies to them.

The data analyzed in Section IV relate to consumer evaluation of remedies. They allow distinctions to be made between the views held by individuals who feel they have a high subjective risk of default and individuals who feel they are unlikely to default. The data also allow distinctions to be made between individuals who previously experienced the exercise of remedies--and those who had not.

Analysis of these data allows us to determine the extent to which consumers' expectations and past experience influence their valuation of various remedy protections. They indicate that some "learning" occurs that, depending on the remedy environment, may make consumers either more or less willing to pay for remedy protections if they have previously been behind on their debt payments. The data also show that a higher proportion of people who expect they may fall behind on their debt payments are willing to pay for protection against the exercise of various remedies than people who expect no future payment difficulties. However, in both cases, the preponderence of consumers were unwilling to pay for various remedy protections.

In Section V, additional consumer data are analyzed. Those data allow the most popular and least popular remedies to be determined from the viewpoint of consumers. When consumer evaluations of remedies are compared to the creditor evaluations reported in Section III, it is apparent that remedies least popular with consumers are least valued by creditors as well. Conversely, the remedies considered to be the most acceptable by consumers are among those most highly valued by creditors. This finding can be explained if one assumes that creditors are sensitive to the "goodwill" they may lose by exercising unpopular remedies. It is consistent with Johnson's argument that market forces will work to inhibit the use of remedies that are less valuable to creditors than they are to consumers.

Finally, Section VI summarizes previous findings and draws conclusions from the empirical analysis.

II. The Nature of the Study

This study analyzes data obtained to measure the use and valuation of various remedies by both creditors and consumers. Data were obtained from simultaneous surveys of large samples of consumers and creditors participating in four local credit markets in early 1979. The four markets were similar in that each was relatively self-contained (an SMSA or adjoining-SMSA's) and each had a relatively large proportion of blue-collar employment. However, the markets differed substantially in terms of their applicable rate ceilings and restrictions on creditors' remedies. Key rate ceiling and remedy restrictions in each market are highlighted in Exhibit 1.

Two local markets were selected to be minimally different in their socio-economic characteristics and maximally different in their legal environments. Those markets were Racine-Kenosha, Wisconsin and Waukegan-North Chicago, Illinois. In Wisconsin, both consumer credit rates and rate ceilings were highly restricted by the Wisconson Consumer Act (WCA). Because of legal restrictions imposed by that Act, repossession of property sold on credit was not possible before lengthy legal procedures had been followed. In addition, late charges on delinquent debts were limited, as were potential deficiency judgments. Also, creditors' attorney's fees could not be collected after default, confession of judgment clauses were not allowed, and non-purchase money security was eliminated on most consumer loans (except those secured by real estate). Further, wage assignments were revocable and garnishment exemptions were greater than those allowed by Federal law.

EXHIBIT 1: CREDITOR REMEDY AND RATE RESTRICTIONS IN SURVEY STATES IN 1979

State	AR	IL	LA	WI
I. Applicable Restrictions on Creditors' Remedies				
A. Overall Level of Restrictions	Not Highly Restrictive	Not Highly Restrictive	Highly Restrictive	Highly Restrictive
B. Late Payment Charges	No provision[1]	Lesser of $10 or 5%	Lesser of[1] Max. Rate, 3% or $5	Lesser of[1][4] $3 or 3%
C. Attorney's Fee Charges	Limited to 10%[2] of principal plus accrued interest	Reasonable[1][2] fees allowed	Up to 25%[1][2] of balance due	Prohibited[1][4] in consumer credit
D. Confession of Judgment	Debtor must[2] appear in court	Valid for[1][2] small loans	Valid only[2] after maturity or for executory process	Prohibited[1][2][4]
E. Repossession	Self-help[1][2] allowed under UCC	Self-help[1][2] allowed under UCC	"Sequestration" requires replevin by legal authority[2]	Requires[3][4] prior judicial process
F. Deficiency Judgments	Allowed[1][2] under UCC	Allowed but[2] may not be available in some cases[1]	No provision[1] but recovery of deficiencies is prohibitively expensive[3]	Prohibited for loans under $1,000[1][2][4]

EXHIBIT 1 (continued)

State	AR	IL	LA	WI
G. Garnishment	Constitutional[1][2] exemptions of $200 per single person and $500 for head of household (includes wages and personal property--)	Equivalent[2] to Federal exemptions in most cases	Prohibited[1][2] on loans if rates exceed 10%; at least $70/wk. or 75% of wages exempt otherwise	40 times minimum wage +$15 per dependent, or 75% of income
H. Wage Assignment	Needs consent of wife and must be accepted in writing by employer. No payment limits [2]	Payment[2] limitations exist, as do notice requirements. Assignments must be stopped if debtor claims a defense	Must be[2] accepted by employer. Has no payment limit	Revocable;[2] expires in 6 mo., requires witnessed signature of spouse
I. Blanket Security	Yes UCC	Yes UCC	Requires notarized list of security	No! Security is basically limited to purchase money interests
II. Applicable Rate Ceilings[5]				
A. Overall Level Ceilings	Low Rates	Generally High Rates	Generally High Rates	Generally Low Rates
B. New Auto (36 mo.)	10%	14.55%	15%	12.83%
C. Bank Credit Cards	10%	18%	18%	18% to $500
D. Installment Sales Credit ($1,000 for 24 mo.)	10%	25.91%	24%	16.29%
E. Personal loans ($1,000 for 24 mo.)	10%	Small Loan Law 25.56% or Installment Loan Law 12.91%	35.43%	Wisconsin Consumer Act 16.29% or Discount Loan Act 20.40%

EXHIBIT 1 (continued)

Sources:

[1] Feldman, Sheldon and Reiley, Kimberly, A., A Compilation of Federal and State Laws Regulating Consumer Financial Services: Monograph No. 8, Credit Research Center, Purdue University, West Lafayette, IN 1977.

[2] Commerce Clearing House, Consumer Credit Guide, Topical Law Reports, 1980.

[3] Personal conversations with finance company executives.

[4] James L. Brown, "The Wisconsin Consumer Act and the Proposed FTC Rule Compared," and "Summaries of the Wisconsin Consumer Act," which are Appendices C and D respectively in Dunkelberg, William C., "Banks' Lending Response to Restricted Creditor Remedies," Working Paper No. 20, Credit Research Center, Purdue University, 1978.

[5] Gushee, Charles C., The Cost of Personal Borrowing in the United States, 1978 edition, Financial Publishing Company (Boston, Massachusetts), 1978.

Across the Illinois border from Racine-Kenosha, the socio-economic environment was similar--with a large blue-collar, industrial base, but the legal environment was quite different. Except for bank loans, Illinois rate ceilings on consumer credit were relatively high. In addition, the legal environment did not place substantial restrictions on creditors' abilities to collect on delinquent and defaulted debts. Repossessions and deficiency judgments could be obtained. Late charges were higher than in Wisconsin and attorney's fees could be added when collecting defaulted debts. Further, self-help repossession was available and even "confession of judgment" clauses were allowed in small loan contracts.

Because the Illinois and Wisconsin markets had the most dissimilar legal restrictions and the most similar populations, 1000 consumers were interviewed in each of the markets. In addition, all savings and loan associations, 90 percent of the commercial banks (100 percent in Illinois) 48 percent of the credit unions, and 74 percent of the consumer finance companies operating in each market were surveyed.

The other two markets were selected because they had unique consumer credit laws, had a large blue-collar base of employment (since blue collar workers are among the most frequent credit users) and provided legal environments that were complementary to the restrictive, non-restrictive environments of Wisconsin and Illinois.

Lake Charles, Louisiana was selected for study because Louisiana is the only state in the nation that has not patterned its laws on the Uniform Commercial Code. As a result, it has one of the most restrictive creditor remedy environments in the nation. Repossession is forbidden; albeit "sequestration," a form of replevin, is allowed as a substitute. However, replevin adds legal complications and expense to the collection of secured property. Further, legal restrictions make it so difficult and expensive to obtain "deficiency" judgments that they are rarely sought. Louisiana allows wage assignments but effectively prohibits wage garnishment to repay consumer loans. It also restricts confessions of judgment and household goods security provisions.

In general, Louisiana laws deter credit collection by adding substantial legal process and expense to potential remedies. At the same time, however, Louisiana consumer credit rate ceilings are among the highest in the nation for all lenders.

In contrast, with Lake Charles, Louisiana, Little Rock-North Little Rock, Arkansas was selected for study because the Arkansas rate ceilings, at ten percent, are the lowest in the nation. At the same time, Arkansas does not place substantial restrictions on creditors' remedies. Self-help repossession, deficiency judgments, and blanket security are available. Wage assignments can be obtained and (limited) attorney's fees can be charged consumers who default on their debts.

Because the Arkansas and Louisiana markets were not restrictive in both rates and remedies, 750 consumers were interviewed in each local market area. In addition, 100 percent of the savings and loan associations, 92 percent of the commercial banks, 40 percent of the credit unions and 71 percent of the finance companies operating in each market were also interviewed (Exhibit 2).

Finally, in each market area, three to six local retailers who held their own credit were also interviewed. All interviews were conducted in early 1979.

EXHIBIT 2: CREDITORS' SURVEYED

Type of Creditor	Number of Creditors (percent surveyed) in WI	IL	AR	LA
Savings and Loan Associations	7(100%)	5(100%)	6(100%)	3(100%)
Commercial Banks	14(86%)	7(100%)	8(88%)	5(100%)
Consumer Finance Companies	18(72%)	13(77%)	0	31(71%)
Credit Unions	34(44%)	28(54%)	54(37%)	21(48%)
Automobile Sales Finance Companies	3(100%)	3(100%)	3(100%)	3(100%)

III. Creditor Use and Valuation of Remedies

A. Creditor Use of Remedies

Creditors were surveyed to determine their use and valuation of various collection remedies.

All creditors interviewed were asked many questions on their credit operations. Among them was a series of questions which asked them what collection actions (remedies) they would use on a hypothetical loan as it became more and more delinquent.

The questions asked various creditors about their collection activities are presented in Exhibit 3. Responses to those questions were analyzed to determine if systematic patterns of collection behavior and remedy use existed among creditors' operating in each state.

Theoretically, one would expect that creditors would be less likely to use "tough" collection remedies early in the debt collection process if loan rates were relatively high. If "tough" remedies were used early, the creditor would immediately stand to lose some customer goodwill. In addition, he would forego potentially valuable interest on debts that ultimately would have been voluntarily repaid. If loan rates were low, the second source of loss would be reduced; thus, creditors would expect to lose less by invoking collection remedies early.

Offsetting the potential losses from collection remedy use, the more effective the remedies available to creditors, the greater the potential gains to creditors from exercising them. Thus, one would expect creditors to use remedies more frequently when (1) remedies were less costly to use and (2) the remedies were effective in generating payments and recoveries on delinquent or defaulted debts.

EXHIBIT 3: Questions Asked Regarding Creditors' use of Remedies

The basic question asked of all creditors closely approximated the following set of questions--which were asked of commercial banks and credit unions.

> Now let us turn to your collection practices and policies. Please describe your typical policy concerning a delinquent unsecured personal loan with an outstanding balance of $1,200. Assume that payments have been made for six months, although two payments were 15 days late.
>
> What is your collection policy when this loan is from 10 days to 30 days delinquent? What would you typically do in the case of this example?
>
> During the period that the loan is from 30 days to 60 days delinquent, what would you typically do next, and when would you do it?
>
> And, as the loan continued to be delinquent, what would you typically do next, and when would you do it?

The set of questions asked savings and loan associations differed only in that they referred to a $1200 home improvement loan. For finance companies, less detail was obtained for short-term delinquencies (10-30 days) and more for longer term delinquencies (90 days and over).

These propositions can be summarized as:

(1) $NPV(I) = R - C_r - GWL - E(FC) > 0$

where the decision to invoke a remedy requires that

$NPV(I)$, the net present value of invoking a remedy be positive,

and

R = the present value of the expected increase in recoveries caused by invoking the remedy,

C_r = the present explicit costs of invoking remedy r,

GWL = the expected present value of the goodwill loss caused by invoking the remedy, and

$E(FC)$ = the expected present value of foregone payments on debts that would be repaid even if the remedy were not invoked.

FC is positive because there is some probability that delinquent debtors will repay their debts and rates of charge on consumer loans typically exceed the creditors' discount rate--since costs of loan origination and collection are substantial in consumer lending. Thus, the greater the contractual revenues that are received on a credit extension, the more fully the creditor can amortize his costs of credit origination.

Based on equation (1) then, we would expect creditors to invoke remedies less frequently in states where permitted remedies were ineffective (R was low), costs of remedy implementation (C_r) were high, potential goodwill losses from invoking the remedy (GWL) were high, or allowable finance rates (and expected voluntary recovery rates) E(FC) were high.

Exhibit 4 presents survey data that summarize creditors' use of "tough" collection remedies in each state. Tough remedies were considered to include those where the creditor turned debt over to a third party or invoked legal action. Such action generally signified an unwillingness on the part of creditors to work out further accommodations with debtors on their own.

It is interesting to note in Exhibit 4 that "tough" actions were taken most quickly and frequently in Arkansas--a state with a low rate ceiling and effective remedies. Also, once the legal delay period was over in Wisconsin, Wisconsin creditors were second most likely to take "tough" actions. Thus, tough actions were (eventually) taken with the greatest frequency in the two states with the lowest rate ceilings. Conversely, they were taken least frequently in the state with the highest rate ceilings and costliest remedy process (Louisiana). These findings are consistent with our theoretical expectations.

B. Creditor Valuation of Remedies

Following questions on their potential collection actions, creditors were presented with a list and brief lay explanation of 14 key remedies. Each was then asked which remedies he would most like to have available if he could only use five of them. In this way creditors were forced to select the set of remedies that they valued most highly. The list of remedies from which creditors were asked to pick five is provided as Exhibit 5. The frequency with which each remedy was selected by various creditors is summarized in Exhibit 6.

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EXHIBIT 4: Creditor Use of Remedies

Frequency with which creditors take "tough action" to collect on delinquent or defaulted debts*

All Institutions

	Wisconsin		Illinois		Arkansas		Louisiana	
	Number	%	Number	%	Number	%	Number	%
Take tough action early*	0	0	1	2.9	5	15.1	1	2.7
Take tough action late*	37	80.4	23	65.7	22	66.7	21	56.8
Never take tough action	9	19.6	11	31.4	6	18.2	15	40.5
Total respondents	46	100	35	100	33	100	37	100

Commercial Banks

	Wisconsin		Illinois		Arkansas		Louisiana	
	Number	%	Number	%	Number	%	Number	%
Take tough action early	0	0	0	0	0	0	1	20
Take tough action late	8	66.7	5	71.4	6	85.7	4	80
Never take tough action	4	33.3	2	28.6	1	14.3	0	0
Total respondents	12	100	7	100	7	100	5	100

Credit Unions

	Wisconsin		Illinois		Arkansas		Louisiana	
	Number	%	Number	%	Number	%	Number	%
Take tough action early	0	0	1	6.7	5	25.0	0	0
Take tough action late	15	100.0	9	60.0	14	70.0	7	77.8
Never take tough action	0	0	5	33.3	1	5.0	2	22.2
Total respondents	15	100	15	100	20	100	9	100

Finance Companies

	Wisconsin		Illinois		Arkansas		Louisiana	
	Number	%	Number	%	Number	%	Number	%
Take tough action early	0	0	0	0	--	--	0	0
Take tough action late	8	61.5	7	70.0	--	--	9	45.0
Never take tough action	5	38.5	3	30.0	--	--	11	55.0
Total respondents	13	100	10	100	--	--	20	100

Saving and Loans

	Wisconsin		Illinois		Arkansas		Louisiana	
	Number	%	Number	%	Number	%	Number	%
Take tough action early	0	0	0	0	0	0	0	
Take tough action late	6	100	2	66.7	2	33.3	1	33.3
Never take tough action	0	0	1	33.3	4	66.7	2	66.7
Total respondents	6	100	3	100	6	100	3	

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*Tough action tallies were based on free-response questions asking creditors what they would do if a slow-paying loan were 10-30 days past due, 30-60 days past due, and 60 days or more past due. "Early tough actions" were defined as occurring before a loan was 60 days past due. Late tough actions were defined as occurring after it was 60 days past due. Free response answers that were classed as tough actions included: filing of a legal action; turning the debt over to an attorney, collection agency, or credit bureau for collection; collecting from a cosignor, garnishing wages, invoking a wage assignment, or repossessing secured property; taking judgment to recover the security, or foreclosing on a debt; taking "every type of action," and "going after the debtor vigorously."

EXHIBIT 5: Questions Used to Ascertain Creditor Evaluation of Remedies

We would now like to talk about collection remedies. We would like to understand which groups of remedies--taken together--are most important to you to reduce your collection costs and to minimize your credit losses. If you had no remedies and could choose five remedies that you could always have available, which five would you choose from this group of 14.

1. LATE PAYMENT CHARGES. Legally allowed penalty charges to debtors for late payment--for example, $5, or 5% of delinquent monthly payment. ( )
2. ATTORNEY'S FEES CHARGES. Legal charges against a defaulting debtor for the creditor's costs of using attorneys to collect the debt. ( )
3. CONFESSION OF JUDGMENT (COGNOVIT NOTE). Procedure whereby a debtor agrees to a judgment against him in case he defaults, without requiring use of formal legal proceedings. ( )
4. REPOSSESSION (in Louisiana, replevin). Legal seizure, initiated by a creditor, of property securing a debt. ( )
5. DEFICIENCY JUDGMENT. A judgment or decree against the debtor for any part of a debt not recovered by sale of the collateral. ( )
6. BLANKET SECURITY. A lien taken by a creditor on all of the household goods of a debtor. ( )
7. WAIVER OF STATUTORY EXEMPTION. A clause in a note waiving the laws shielding certain personal property from a creditor's claims. ( )
8. GARNISHMENT. A legal procedure whereby some of a debtor's wages or other assets held by employer or other third party may be assigned to the creditor. ( )
9. WAGE ASSIGNMENT. A voluntary assignment of wages made by a debtor to the creditor at the time a loan is made, that becomes effective in case of default. ( )
10. ACCELERATION UPON DEFAULT. A clause permitting the creditor to claim the entire balance due in the event of default on a credit assignment. ( )
11. REAFFIRMATION OF DEBTS AFTER BANKRUPTCY. An agreement made by a debtor, after being declared bankrupt, to repay a debt even though he was freed of the debt by the bankruptcy proceedings. ( )
12. CO-SIGNOR AGREEMENT. An agreement whereby parties other than the principal debtor agree to pay a debt if the debtor defaults. ( )
13. CONTACTING EMPLOYERS AND RELATIVES. A creditor's right to contact employers, relatives, or others in an effort to locate a delinquent debtor or to encourage payment of a delinquent balance. ( )
14. FORECLOSURE. Legal seizure of property to liquidate a defaulted debt secured by a mortgage on the property. ( )

Analysis of Exhibit 6 indicates that different classes of creditors assigned different values to different remedies--depending upon the nature and mix of their consumer loan business. Thus, savings and loan associations highly valued foreclosures, finance companies valued reaffirmation of debts after bankruptcy, and credit unions valued wage assignments more highly than other creditors.

Some remedies particularly "blanket security" and "waivers of statutory exemption on household goods" were notably unpopular with all creditors. Other remedies, such as garnishment, late payment charges, attorney's fees, and repossession were highly valued by most types of creditors.

Confession of judgment clauses were not highly valued in general. However, they were allowed only in Illinois--where they were highly valued by a number of creditors. This suggests that past creditor experience with various remedies affected the relative rankings shown in Exhibit 6.

IV. Consumer Valuation of and Attitudes Toward Remedies

A. Risk Classification of Consumers

All consumers surveyed were asked numerous questions about their households' financial status, debt use, and attitudes toward debt. Included in those questions was a question designed to determine the likelihood with which consumers thought they would experience debt repayment problems in the near future.

Consumers were defined to be of high subjective risk if they responded "very likely" or "somewhat likely" to a question asking

EXHIBIT 6: Creditors' Valuation of Remedies

(Percent of creditors selecting each remedy when they could choose only 5 of 14 remedies)

Remedy			Creditor			
	Total (average for five creditors)	Commercial Banks	Fin. Cos.	Credit Unions	S&L's	Retailers
Garnishment	62.4%	65%	87%*	72%*	14%	74%
Late Payment Charges	49.6	52	42	27	90	37
Attorneys' Fee Charges	48.0	13	31	50	67	79*
Repossession	46.6	77*	40	52	38	26
Cosignor Agreements	44.8	48	38	67	24	47
Foreclosure	43.0	52	40	18	100*	5
Acceleration	39.4	48	18	23	71	37
Reaffirmation	36.0	23	49	45	5	58
Deficiency Judgments	32.8	61	31	23	38	11
Wage Assignments	27.8	16	38	43	5	37
Contacting Non-debtors	25.0	3	29	35	5	53
Confession of Judgment**	23.2	29	29	13	29	16
Blanket Security	7.4	6	18	8	0	5
Waiver of Exemption	2.6	3	7	3	0	0

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*Remedy most preferred by creditors of this type.

**In Illinois, where this remedy is allowed on a restricted basis, it was selected by 38% of all creditors, including 43% of banks, 50% of finance companies, 20% of credit unions, 60% of savings and loans, and 33% of retailers.

Note: The seven most preferred remedies for each creditor are underlined.

M22. "How likely do you think it is that you might have trouble repaying some of your debts in the next year or two. Would you say it is...

Very likely ☐
Somewhat likely ☐
Not very likely ☐
Not at all likely ☐
☐

They were deemed to have low subjective risk if they responded "not at all likely" or "not very likely" to that question.

Consumers also were asked about their previous payment experiences. In particular, they were asked

M9. In making payments on your debts in 1977 or 1978, did you make all the payments the way they were scheduled, did you get behind, or did you make payments that were larger than required or more frequent than scheduled?

1. As scheduled ☐
2. Got behind ☐
3. Larger or faster ☐
4. Both got behind and paid ahead ☐
5. No debts ☐

Because consumers that get behind on their payments often receive bad credit ratings that hurt their future ability to obtain credit, people who got behind on their payments (even if they also paid ahead) were defined as being of high "objective risk." In addition to raising their potential risk in creditors' eyes, such people would have the most knowledge of what remedies creditors in their state actually exercised. The limited number of people who both "got behind and paid ahead" on their debts was included in this category because some of them might also have experienced creditors' collection remedies--particularly because some may have paid "ahead" only by refinancing their debts or taking out a debt consolidation loan.

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B. Consumer Valuation of Remedy Protections

Consumers were asked a series of questions to determine how much they would pay for various remedy protections (Exhibit 7). Because of a pretest experiment, it was decided that this information could be obtained more effectively if consumers were asked how much they were willing to pay at the present time "in addition[al]" charges to protect themselves against the exercise of various remedies.[7]

It was hypothetized that consumers would be more willing to pay for various remedy protections if (1) they had high subjective risk, and (2) if they had high objective risk--particularly if remedies in that state were relatively onerous. It was also hypothesized that consumers would be less willing to pay for various remedy protections if (1) they had high objective risk and particular remedies were highly restricted in that state, or if (2) remedies in a state were generally highly restricted or little used.

Statistics that analyze consumers' willingness to pay for protection against late charges, attorneys fees, repossession, and deficiency judgment are presented in Exhibits 8, 9, 10, and 11. Because the majority of people were willing to pay "zero" for remedy protections (probably because they had low expectations that they would default on a loan), we focused on that group in making interstate comparisons. By treating consumer responses as binomial variables (either zero or not), we were able to make use of the fact that, for large numbers of observations, the binomial distribution can be approximated by a normal distribution. This allowed us to conduct t-tests to determine if the percentage of zero responses in any one state was significantly different from the percentage of zero responses in all other states combined.

EXHIBIT 7: Questions on Consumers Willingness to Pay for Remedy Protections

The following interview sequence was asked to determine how much people are willing to pay for various creditor remedy protections.

At times some people have difficulty repaying loans. This could happen because of unexpected layoffs, job losses, sickness, death, or family financial problems. When people fall behind on their payments, lenders may use a number of legal "remedies" to try to get their money back. We are interested in how much extra money people might be willing to pay in order to borrow money from a lender who agreed in writing that he would not use certain "remedies" in collecting money owed.

Suppose you borrowed $4,000 for 48 months for a new car. You would have to pay back approximately $1,000 in finance charges on that loan in addition to the $4,000 you borrowed.

M18. We are interested in how much extra in a one-time charge or fee you would be willing to pay to borrow from a lender who would give you a loan contract that would not make you pay his attorney's fees (which might be as much as $300) if he had to sue you to collect on the loan. $ __________ EXTRA

M19. Many lenders can assess "late charges" if your payment is more than two (2) weeks late. If a lender would agree to assess a late charge of $1 rather than $5 for each payment overdue, how much extra would you be willing to pay in a one-time charge or fee to obtain a $4,000 48-month loan from such a lender? $ __________ EXTRA

If a borrower stopped paying on an auto loan when he still owed $2,000 and the car was worth only $1,500, the lender can take back the car and then sue for the extra $500.

M20. How much extra would you be willing to pay in a one-time charge or fee to obtain a $4,000, 48-month new car loan from a lender who agreed that if you stopped paying, he could only sue for the balance due on the loan ($2,000) but could not take back the car? $ __________ EXTRA

EXHIBIT 7 (continued)

M21. Now suppose the lender agreed that if the borrower stopped paying, the lender would only take back the card (worth $1,500) but would not sue for the difference ($500). How much extra in a one-time charge or fee would you pay for such an agreement?

$ __________EXTRA

The distribution of zero responses was important both because it indicated how many people were totally unwilling to pay for specific remedy protections (and thus perceived no benefit to them from various protections) and because it had a major effect on estimates of the mean amount that people were willing to pay for various protections.

Calculations of the mean amount people were willing to pay for various remedy protections are presented in Exhibits 8 to 11. The grand mean includes all respondents except those that gave either uncodable answers or answers that were unrealistically large.[8] It was necessary to eliminate unrealistically large responses from calculations of the grand mean because a few consumers did not give thoughtful responses to the questions, and a few widely unrealistic responses could have a major effect on the relatively small grand mean estimates.

The grand mean estimates we obtained were highly influenced by the large proportion of the public that said they would pay nothing extra for a remedy. In order to see if people who were willing to pay for remedy protections were willing to pay more or less in various states, zero responses were eliminated, and "adjusted means" were calculated. The adjusted means showed the average value of the remedy to those people who were willing to pay for that protection.

Finally, calculations were made of the percentage of respondents that was willing to pay non-zero amounts for various remedy protections, even if those amounts were unrealistically high. This percentage, plus the percentage that was not willing to pay anything adds to less than 100 percent because some people did not answer the question or did not know how much they were willing to pay.

Exhibit 8: Consumers' willingness to pay for protection against high late charges

	Full Sample $	Wisconsin $	Wisconsin % zero/t	Illinois $	Illinois % zero/t	Arkansas $	Arkansas % zero/t	Louisiana $	Louisiana % zero/t
All People									
Grand Mean	$ 6.77	$ 6.23	72.7%	$ 9.44	69.0%	$ 7.18	72.6%	$ 3.35	80.8%
Adjusted Mean	33.80	30.09	-.5288	37.51	-3.570*	34.35	-.5266	30.39	+5.656*
Percent Nonzero	18.8%	19.2%		23.4%		19.6%		10.9%	
High Objective Risk									
Grand Mean	10.10	5.17	67.0%	11.93	55.9%	14.13	57.4%	8.07	73.8%
Adjusted Mean	31.58	19.69	+1.346	34.60	-1.414	40.80	-1.092	43.85	+1.849*
Percent nonzero	29.6%	27.4%		29.4%		36.1%		19.0%	
Low Objective Risk									
Grand Mean	6.34	6.55	74.7%	9.52	71.2%	6.08	76.0%	2.84	82.6%
Adjusted Mean	34.46	32.04	-.938	39.45	-3.090*	32.72	+.013	30.39	+4.644*
Percent Nonzero	17.4%	19.3%		22.6%		17.7%		9.0%	
High Subjective Risk									
Grand Mean	13.23	12.47	58.6%	15.85	54.7%	15.43	51.8%	6.08	64.9%
Adjusted Mean	37.16	36.04	+.421	40.11	-.538	38.58	-1.189	25.53	+1.619
Percent Nonzero	32.3%	32.2%		35.9%		35.9%		21.6%	
Low Subjective Risk									
Grand Mean	5.89	5.61	74.3%	8.41	71.7%	5.97	72.6%	2.75	84.2%
Adjusted Mean	32.67	28.97	-1.505	36.37	-3.502	32.93	+.324	30.39	+4.033*
Percent Nonzero	17.0%	18.1%		21.7%		17.4%		8.7%	

	Total Willing to Pay**		Willing to Pay Nothing				Willing to Pay Something			
Objective risk	Zero	Something	WI	IL	AR	LA	WI	IL	AR	LA
Low	1859	425	525	437	421	476	136	139	98	52
High	221	106	71	57	62	31	29	30	39	8
	χ^2 = 62.969(.0000)*		χ^2 = 14.825(.0014)*				χ^2 = 8.957(.0299)*			
Subjective risk										
Low	2344	523	670	622	510	542	163	188	116	56
High	226	129	51	70	57	48	28	46	39	16
	χ^2 = 32.817(.0000)*		χ^2 = 5.607(.1324)				$\chi^2 \equiv$ 6.256(.0998)*			

*Significant at the 90 percent (two-tailed) confidence level.
**Nonresponses are not included.

Exhibit 9: Consumers' willingness to pay for protection against assessment of creditors' attorneys' fees

	Full Sample	Wisconsin		Illinois		Arkansas		Louisiana	
	$	$	% zero/t	$	% zero/t	$	% zero/t	$	% zero/t
				All People					
Grand Mean	$15.69	$16.85	71.4%	$18.21	69.4%	$16.77	69.6%	$ 9.47	80.4%
Adjusted Mean	81 27	82.98	-.7815	75.83	-2.418*	81.47	-1.865*	94.55	+6.041*
Percent nonzero	18.4%	19.1%		23.3%		19.5%		9.6%	
				High Objective Risk					
Grand Mean	20.76	17.14	68.9%	28.75	64.7%	21.31	57.4%	9.47	78.6%
Adjusted Mean	79.33	71.52	+.9149	104.72	-.1638	65.36	-2.030*	72.00	+2.150*
Percent nonzero	25.4%	24.5%		25.5%		31.5%		11.9%	
				Low Objective Risk					
Grand Mean	14.84	17.23	72.3%	18.81	70.4%	15.91	71.8%	6.48	81.9%
Adjusted Mean	81.50	84.05	-1.206	79.47	-2.291	81.84	-1.273	79.26	+5.450*
Percent nonzero	17.4%	19.2%		23.5%		18.1%		8.0%	
				High Subjective Risk					
Grand Mean	27.16	27.90	60.9%	25.80	58.6%	28.79	50.0%	26.41	68.9%
Adjusted Mean	87.10	89.50	+.4877	78.11	-.0146	78.28	-2.139*	130.00	+2.075*
Percent nonzero	29.1%	27.6%		32.8%		33.6%		17.6%	
				Low Subjective Risk					
Grand Mean	13.96	15.64	72.7%	16.61	71.7%	15.18	73.1%	6.74	83.2%
Adjusted Mean	78.85	81.85	-1.554	73.69	-1.825*	82.39	-2.461*	80.49	+6.230*
Percent nonzero	16.9%	18.2%		21.9%		17.4%		8.1%	

Objective risk	Total Willing to Pay**		Willing to Pay Nothing				Willing to Pay Something			
	Zero	Something	WI	IL	AR	LA	WI	IL	AR	LA
Low	1810	425	508	432	398	472	135	144	100	46
High	234	91	73	66	62	33	26	26	34	5
	χ^2 = 13.678(.0002)*		χ^2 = 16.211(.0010)*				χ^2 = 8.563(.0357)*			
Subjective risk										
Low	2301	522	656	622	487	536	164	190	116	52
High	234	116	53	75	55	51	24	42	37	13
	χ^2 = 40.706(.0000)*		χ^2 = 5.304(.1508)				χ^2 = 7.556(.0561)*			

*Significant at the 90 percent (two-tailed) confidence level.
**Non-responses are not included.

Exhibit 10: Consumers' willingness to pay for protection against repossession

	Full Sample	Wisconsin		Illinois		Arkansas		Louisiana	
	$	$	% zero/t	$	% zero/t	$	% zero/t	$	% zero/t
All People									
Grand Mean	$17.28	$15.90	74.2%	$21.55	69.1%	$20.90	71.4%	$ 9.33	81.6%
Adjusted Mean	92.68	83.66	+.401	87.40	-3.826*	105.40	-1.609	111.23	+6.157*
Percent Nonzero	17.6%	17.4%		23.2%		18.6%		9.5%	
High Objective Risk									
Grand Mean	32.61	28.47	67.0%	40.19	59.8%	29.79	57.4%	33.15	76.2%
Adjusted Mean	111.87	98.17	+.9911	134.5	-.8119	72.65	-1.450	210.00	+2.056*
Percent Nonzero	26.5%	27.4%		25.5%		31.5%		14.3%	
Low Objective Risk									
Grand Mean	15.30	13.62	76.8%	22.40	70.0%	18.21	75.6%	6.86	83.7%
Adjusted Mean	88.40	74.91	+.5034	92.20	-3.903*	97.83	-.359	93.92	+5.345*
Percent Nonzero	16.5%	17.1%		23.3%		17.5%		7.5%	
High Subjective Risk									
Grand Mean	39.48	47.16	52.9%	41.47	53.9%	44.26	52.7%	18.05	68.9%
Adjusted Mean	114.42	110.97	-.688	103.67	-.614	129.83	-.841	133.13	+2.578*
Percent Nonzero	32.1%	39.1%		35.9%		31.8%		17.6%	
Low Subjective Risk									
Grand Mean	14.19	12.86	76.5%	18.17	72.2%	17.66	75.1%	6.97	84.5%
Adjusted Mean	85.59	76.68	-.134	81.82	-3.057*	98.68	-1.071	97.24	+5.886*
Percent Nonzero	15.7%	15.4%		21.1%		16.7%		7.8%	

	Total Willing to Pay**		Willing to Pay Nothing				Willing to Pay Somthing			
	Zero	Something	WI	IL	AR	LA	WI	IL	AR	LA
Objective risk										
Low	1863	403	540	430	411	482	120	143	97	43
High	226	395	71	61	62	32	29	26	34	6
	χ^2 = 24.476(.0000)*		χ^2 = 15.525(.0014)*				χ^2 = 7.002(.0718)*			
Subjective risk										
Low	2361	483	690	627	500	544	139	183	111	50
High	224	128	46	69	58	51	34	46	35	13
	χ^2 = 74.8381(.0000)*		χ^2 = 8.909(.0305)*				χ^2 = 1.087(.7800)			

*Significant at the 90 percent (two-tailed) confidence level.
**Non-responses are not included.

Exhibit 11: Consumers' willingness to pay for protection against deficiency judgments

All People

	Full Sample	Wisconsin		Illinois		Arkansas		Louisiana	
	$	$	% zero/t	$	% zero/t	$	% zero/t	$	% zero/t
Grand Mean	$16.66	$13.50	74.7%	$19.82	69.4%	$18.64	73.1%	$14.43	83.6%
Adjusted Mean	90.35	74.57	-.0102	78.86	-4.434*	95.73	-1.152	170.14	+7.070*
Percent Nonzero	16.9%	16.5%		23.3%		17.6%		8.0%	
High Objective Risk									
Grand Mean	28.29	28.48	72.6%	33.64	59.8	34.38	56.5%	10.00	81.0%
Adjusted Mean	103.52	70.91	+2.017*	112.57	-1.296	98.19	-2.191	78.00	+6.510*
Percent Nonzero	24.9%	20.8%		25.5%		33.3%		11.9%	
Low Objective Risk									
Grand Mean	13.83	12.53	76.5%	20.26	70.4%	14.30	76.9%	7.94	85.2%
Adjusted Mean	81.98	69.70	-.435	81.03	-4.351*	84.33	-.139	122.59	+5.942*
Percent Nonzero	15.7%	16.8%		23.5%		15.7%		6.1%	
High Subjective Risk									
Grand Mean	35.38	32.68	58.6%	31.77	54.7%	44.14	50.9%	32.34	74.3%
Adjusted Mean	106.13	102.12	+.161	80.11	-.955	110.95	-1.206	230.00	+3.416*
Percent Nonzero	29.3%	27.6%		35.9%		33.6%		13.5%	
Low Subjective Risk									
Grand Mean	13.42	11.70	76.7%	16.89	72.4%	14.94	77.2%	9.53	86.3%
Adjusted Mean	82.28	70.38	-.746	73.91	-4.190*	90.21	-.2922	141.95	+2.091*
Percent Nonzero	15.2%	15.3%		21.4%		15.3%		6.4%	

	Total Willing to Pay**		Willing to Pay Nothing				Willing to Pay Something			
Objective risk	Zero	Something	WI	IL	AR	LA	WI	IL	AR	LA
Low	1887	348	538	432	426	491	118	144	87	35
High	233	89	77	61	61	34	22	26	36	5
	χ^2 = 21.061(.0000)*		χ^2 = 14.454(.0023)*				χ^2 = 12.103(.0070)*			
Subjective risk										
Low	2390	467	692	628	514	556	138	186	102	41
High	232	117	51	70	56	55	24	46	37	10
	χ^2 = 60.458(.0000)*		χ^2 = 5.524(.1372)				χ^2 = 6.528(.0886)*			

*Significant at the 90 percent (two-tailed) confidence level.
**Non-responses are not included.

1. Overall Results

Analysis of the data presented in Exhibits 8-11 allows us to draw the following conclusions. Overall, very few people were willing to pay anything for protection against various remedies. For the full population, only 16.9 to 18.8 percent were willing to pay for such protection, depending on the remedy involved. Even among people with high subjective risk only 29.1 to 32.3 percent were willing to pay for various remedy protections. Thus, full sample results closely reflected results applicable to the much larger group of people with low subjective risk (where only 15.2 to 17.0 percent were willing to pay for remedy protections).

High objective risk people, interestingly enough, were less frequently willing to pay for various remedy protections than high subjective risk people. Seemingly, some people who had been behind on their debts either did not expect to get behind on their debts in the future or had not experienced burdensome remedies.

Consumers, in general, were most willing to pay something for protection against high late charges (18.8 percent) and least willing to pay for protection against deficiency judgments (16.9 percent). The average amount they were willing to pay was relatively low--ranging from $6.77 for late charge protection to $17.28 for protection against repossession. Thus, on average, consumers were willing to pay only 0.2 to 0.4 percent more (on a $4,000 contract) for any one remedy protection.

Even when only consumers willing to pay for remedy protection were considered, the average amounts such consumers were willing to pay for such protection were relatively low--ranging from $33.80 for late charge protection to \$92.68 for protection against repossession. Thus, even those consumers, on average, were willing to pay only 0.8 to 2.3 percent extra for protection against various specific remedies.

2. Interstate Differences

The χ^2 tests at the bottom of Exhibits 8 to 11 indicate that significant interstate differences exist in subjective and objective risk distributions associated with consumers' willingness or unwillingness to pay for remedy protection. Also, analysis of differences in the number of people willing or unwilling to pay for various remedy protections--(reported at the top of each table) show that actual differences in people's willingness to pay for remedy protections are strongly correlated with state remedy environments and their past experience.

Of particular interest is the fact that, for each remedy considered, Louisiana residents were least willing to pay for various remedy protections. This is pertinent because Louisiana creditors were least likely to pursue "tough" remedies--possibly because the Louisiana legal environment is highly restrictive while rate ceilings are high.

In contrast with Louisiana, Illinois had the lowest percentage of residents that was unwilling to pay for various remedy protections. Illinois remedies, in general, were among the least favorable to the consumer. In Illinois, the more permissive remedy environment, *per se*, may have made consumers more willing to pay for remedy protection than in Louisiana--even though Illinois rates were high and creditors did not exercise tough remedies very frequently.

The overall Illinois results primarily reflected the views of low subjective risk consumers. The low subjective risk group in Illinois was the *only* risk category of borrowers that always showed a significantly greater willingness to pay for remedy protections than similar consumers in other states. This finding suggests that differences in Louisiana and Illinois results may have primarily reflected differences in the legal environment, *per se*, rather than differences in experience--since differences in past remedy experience would be expected to affect high-risk consumers more than low-risk consumers.

Nonetheless, differences in past remedy experience clearly had a substantial impact on consumers in Arkansas and Wisconsin. Arkansas consumers, who lived in the "toughest" remedy environment, were uniformly most frequently willing to pay for remedy protection after they had previously fallen behind on their debts (i.e. if they were of high objective risk). However, Arkansas consumers who had not previously fallen behind on their debts (low objective risk consumers) were not significantly more willing to pay for remedy protections in Arkansas than elsewhere. Clearly, Arkansas consumers learned about the "tough" collection practices in their state through past experience.

Taken altogether, Arkansas consumers were more frequently willing to pay for remedy protections than consumers in Wisconsin and Illinois--where statutory restrictions on remedies were greater, but (except for the high objective risk borrowers) were less frequently willing to pay for remedy protections than Illinois consumers (where statutory restrictions on remedies were least restrictive).

Wisconsin borrowers, like Arkansas borrowers, also seemed to learn from experience. In particular, high objective risk borrowers in Wisconsin had obviously learned that late charges were severely limited in Wisconsin. If they had previously been behind on their debts, Wisconsin borrowers were willing to pay much less for late charge protection ($5.17 versus $8 to $14) than previously delinquent borrowers in other states. In contrast, low objective risk borrowers in Wisconsin (who had not fallen behind on their debts), were willing to pay substantially more for late charge protection ($6.55) than both high objective risk borrowers in Wisconsin and low objective risk borrowers in other states.

Some evidence of learning by experience also exists with regard to attorney's fees. There again, high objective risk borrowers in Wisconsin were willing to pay less for such protection than borrowers in general ($17.14 in Wisconsin versus $20.76 in all states combined). Further, high objective risk borrowers were not willing to pay more for protection against creditors' attorneys fees than low-risk Wisconsin borrowers. Seemingly, Wisconsin borrowers who had previously fallen behind on their debts did not worry (more than Wisconsin borrowers in general) about paying creditors' attorneys fees. This makes sense since attorney's fees cannot be charged on consumer debts in Wisconsin. In contrast, in every other state, high objective risk borrowers, on average, were willing to pay substantially more for protection against attorney's fees than borrowers who had not previously fallen behind on their debts.

B. Consumer Attitudes Towards Remedies

In addition to questions regarding consumers' willingness to pay for various remedy protections, each questionnaire also contained a set of questions designed to determine consumer attitudes toward various remedies. Those questions and summaries of consumers' responses are shown in Exhibit 12. Exhibits 13 through 22 provide data on the acceptability ranking of each remedy, both in total and by each risk group in every state.

Overall, there were four out of the ten remedies that consumers generally found acceptable, and two where the number of consumers that felt they should not be permitted roughly equalled the number that thought they should. Four remedies were, on balance, unpopular with consumers.

It is interesting to note that the relative (popularity) rank of the remedies varied little according to either the riskiness of the consumer or according to the state of residence. This held true even though, with the exception of refinancing, generally a lower percentage of high-risk consumers said that particular remedies were acceptable. Overall, the least popular remedies were those that would enable a creditor to take and sell household goods that were not purchased with the credit. The remedies implied by this question are "blanket security" and "waiver of exemption" provisions. Interestingly enough, these are also the remedies that were least favored by creditors. However, the unpopularity of these remedies does not appear to arise from consumers' fear that the remedies will be exercised against them (Exhibit 19). Only 13.1 percent of those that did not expect future credit difficulty said such remedies were acceptable, while 18.8 percent who did expect

Exhibit 12: Questions on Consumers' Views of Remedies

The following question sequence was used to elicit consumer attitudes on what remedies they deemed to be appropriate. The percentage of consumers that responded yes or no to each question is also recorded.

> Sometimes people have difficulty in paying their debts and fall behind in their payments. When this happens, creditors have several courses of action that they may follow. In your opinion, which of these should a creditor be permitted to do to collect a debt that is owed?

	YES(%)	NO(%)	DON'T KNOW OR NOT AVAILABLE(%)
A. CHARGE AN EXTRA FEE IF PAYMENTS ARE LATE BY 30 DAYS OR MORE	75.7%	20.3%	4.0%
B. RENEGOTIATE THE LOAN WITH LOWER MONTHLY PAYMENTS, BUT AT A HIGHER INTEREST RATE	46.8	44.7	8.6
C. CALL THE CONSUMER AT REGULAR INTERVALS TO REMIND HIM THAT THE DEBT MUST BE PAID	60.2	35.5	4.3
D. CONTACT THE CONSUMER'S EMPLOYER ABOUT THE DEBT OWED	27.7	67.4	4.9
E. TAKE BACK THE ITEM PURCHASED ON CREDIT	70.1	24.0	5.9
F. TAKE BACK AND SELL THE ITEM PURCHASED, THEN SUE FOR ANY AMOUNT OWNED BUT NOT COVERED BY SALE	33.4	56.4	10.1
G. IF NO PARTICULAR ITEM WAS PURCHASED WITH THE LOAN, TAKE HOUSEHOLD GOODS AND SELL THEM TO PAY OFF THE DEBT	13.9	79.6	6.5
H. ASK AN EMPLOYER TO TAKE PART OF THE CONSUMER'S WAGE TO PAY OFF THE DEBT	39.4	54.5	6.1
I. LEGALLY FORCE THE CONSUMER TO PAY THE CREDITOR'S LEGAL FEES IF THE CREDITOR HAS TO SUE	43.3	43.9	12.8
J. LEGALLY FORCE THE CONSUMER TO USE MONEY IN SAVINGS ACCOUNTS TO PAY OFF THE DEBTS	64.8	28.6	6.7

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Exhibit 13: Percent of consumers responding that late fees were acceptable

	Full Sample		Wisconsin			Illinois			Arkansas			Louisiana		
	% Yes	Rank	% Yes	Rank	t	% Yes	Rank	t	% Yes	Rank	t	% Yes	Rank	t
All People	75.7	1	73.3	1	-2.087*	72.7	1	-2.051*	77.5	1	+1.365	81.2	2	+4.200*
High sub. risk	67.2	1	66.7	1	-.111	65.6	1	-2.709*	63.6	1	-.909	75.7	2	+1.840*
Low sub. risk	77.2	1	74.6	1	-2.189*	49.1	4T	-3.002*	80.3	1	+2.230*	82.8	2	+4.050*
High obj. risk	73.2	1	75.5	1	+.641	73.5	1	+.092	70.4	1	-.773	73.8	2	+.096
Low obj. risk	78.5	1	75.7	1	-2.198*	73.8	1	-3.227*	80.7	1	+1.379	85.4	1	+5.021*

Distribution of Responses

	By Objective Risk		By Subjective Risk	
	Low Risk	High Risk	Low Risk	High Risk
Yes responses	1924	262	2379	268
No responses	446	90	584	117
	χ^2 = 8.407(.0037)*		χ^2 = 22.835(.0000)*	

NOTE: T refers to a tie

*Indicates significance at the 90 percent (two-tailed) level.

Exhibit 14: Percent of consumers indicating that refinancing was acceptable

	Full Sample		Wisconsin			Illinois			Arkansas			Louisiana		
	% Yes	Rank	% Yes	Rank	t	% Yes	Rank	t	% Yes	Rank	t	% Yes	Rank	t
All People	46.8	5	43.9	6	-1.629	48.5	5	+2.780*	48.3	5	+.974	46.5	5	-.179
High sub. risk	47.4	5	34.5	6T	-2.813*	44.5	5	-.779	57.3	3T	+2.456*	52.7	4	+1.012
Low sub. risk	46.9	5	44.9	6	-1.421	49.1	4T	+1.527	47.0	6	+.0664	46.6	5	-.171
High obj. risk	46.1	5	39.6	6	-1.605	48.0	5	+.464	49.1	5	+.740	50.0	4	+.533
Low obj. risk	47.7	5	43.8	6	-2.448*	50.0	5	+1.321	50.0	6	+1.235	47.7	5	+.028

Distribution of Responses

	By Objective Risk		By Subjective Risk	
	Low Risk	High Risk	Low Risk	High Risk
Yes responses	1167	165	1444	189
No responses	1091	178	1374	186
	χ^2 = 1.385(.2391)		χ^2 = .063(.8015)	

NOTE: T refers to a tie

*Indicates significance at the 90 percent (two-tailed) level.

Exhibit 15: Percent of consumers indicating that regular phone calls were acceptable

	Full Sample		Wisconsin			Illinois			Arkansas			Louisiana		
	% Yes	Rank	% Yes	Rank	t	% Yes	Rank	t	% Yes	Rank	t	% Yes	Rank	t
All People	60.2	4	66.6	4	+5.037*	54.4	4	-4.728*	62.3	4	-1.371	57.3	4	1.800*
High sub. risk	55.1	3	57.5	3	+.494	57.0	2	+.522	51.8	5	-.714	54.1	3	-.206
Low sub. risk	61.0	4	67.5	4	+4.909*	53.9	3	-4.968*	64.3	4	+1.990*	57.9	4	-1.770*
High obj. risk	55.3	3	53.8	4	-.376	53.9	3	-.331	63.0	3	1.943	42.9	5	-1.716
Low obj. risk	61.0	4	65.9	4	+3.174	53.6	4	-4.299	61.4	4	.196	62.7	4	+.939

Distribution of Responses

	By Objective Risk		By Subjective Risk	
	Low Risk	High Risk	Low Risk	High Risk
Yes responses	1493	198	1878	220
No responses	868	153	1081	164
	χ^2 = 5.777(.0162)*		χ^2 = 5.285(.0215)*	

*Indicates significance at the 90 percent (two-tailed) level.

Exhibit 16: Percent of consumers indicating that employer contacts were acceptable

	Full Sample		Wisconsin			Illinois			Arkansas			Louisiana		
	% Yes	Rank	% Yes	Rank	t	% Yes	Rank	t	% Yes	Rank	t	% Yes	Rank	t
All people	27.7	9	24.6	9	-2.707*	29.2	9	+1.268	28.3	9	+.437	29.2	9	+1.034
High sub. risk	25.1	9	10.3	10	-4.508*	27.3	9	+1.870*	19.1	8	-1.796	47.3	5	+3.707*
Low sub. risk	27.9	9	25.7	9	-1.778*	29.5	9	+1.204	29.4	9	+.967	27.3	9	-.378
High obj. risk	19.6	9	12.3	9	-2.531*	25.5	9	+1.680	16.7	9	-.933	31.0	6T	+1.713
Low obj. risk	26.6	9	23.6	9	-2.204*	26.4	9	-.168	28.3	9	+.993	29.0	9	+.392

	Distribution of Responses			
	By Objective Risk		By Subjective Risk	
	Low Risk	High Risk	Low Risk	High Risk
Yes responses	652	70	860	100
No responses	1689	282	2071	285
	$\chi^2 = 9.491(.0021)$*		$\chi^2 = 1.715(.1902)$	

NOTE: T refers to a tie

***Indicates significance at the 90 percent (two-tailed) level.**

Exhibit 17: Percent of consumers indicating that repossession was acceptable

	Full Sample		Wisconsin			Illinois			Arkansas			Louisiana		
	% Yes	Rank	% Yes	Rank	t	% Yes	Rank	t	% Yes	Rank	t	% Yes	Rank	t
All people	70.1	2	72.0	2	+1.520	57.4	2	-10.161*	73.4	2	+2.359*	81.7	1	+8.786*
High sub. risk	61.2	2	62.1	2	+.197	52.3	3	-2.449*	58.2	2	-.743	79.7	1	+4.184*
Low sub. risk	71.8	2	73.2	2	+1.108	58.2	1	-9.978*	76.6	2	+3.239*	83.2	1	+8.281*
High obj. risk	69.0	2	71.7	2	+.725	60.8	2	-2.046*	68.5	2	-.127	83.3	1	+2.540*
Low obj. risk	72.0	2	72.5	2	+.350	57.2	2	-8.919*	75.3	2	+1.974*	84.2	2	+8.531*

Distribution of Responses

	By Objective Risk		By Subjective Risk	
	Low Risk	High Risk	Low Risk	High Risk
Yes responses	1763	247	2211	244
No responses	556	98	698	134
	$\chi^2 = 2.947(.0860)$*		$\chi^2 = 22.618(.0000)$*	

*Indicates significance at the 90 percent (two-tailed level.

Exhibit 18: Percent of consumers indicating that deficiency judgments were acceptable

Class	Full Sample		Wisconsin			Illinois			Arkansas			Louisiana		
	% Yes	Rank	% Yes	Rank	t	% Yes	Rank	t	% Yes	Rank	t	% Yes	Rank	t
All people	33.4	8	33.7	8	+.863	35.8	8	+2.564*	32.0	8	-.047	31.2	7	-1.173
High sub. risk	28.1	8	31.0	8	+.513	30.5	8	+.721	18.2	9	−2.966*	35.1	9	+1.421
Low sub. risk	34.4	8	34.4	8	-.011	37.0	8	+1.882*	34.2	8	-.091	31.1	7	-2.036*
High obj. risk	27.4	8	31.1	7T	+2.548*	30.4	8	+.790	19.4	8	-2.350*	31.0	6T	+.530
Low obj. risk	34.4	8	33.4	8	-.651	37.5	8	+1.814*	35.9	8	+.844	30.9	7	-2.063*

Distribution of Responses

	By Objective Risk		By Subjective Risk	
	Low Risk	High Risk	Low Risk	High Risk
Yes responses	842	98	1059	112
No responses	1374	231	1708	259
	χ^2 = 10.054(.0015)*		χ^2 = 8.796(.0030)*	

*Indicates significance at the 90 percent (two-tailed) level.

NOTE: T refers to a tie

Exhibit 19: Percent of consumers indicating that blanket security or waiver of exemption were acceptable

Class	Full Sample		Wisconsin			Illinois			Arkansas			Louisiana		
	% Yes	Rank	% Yes	Rank	t	% Yes	Rank	t	% Yes	Rank	t	% Yes	Rank	t
All people	13.9	10	12.8	10	-1.312	12.7	10	-1.112	12.7	10	-3.502	18.2	10	+.511
High sub. risk	18.8	10	19.5	9	+.197	12.5	10	-1.453	10.9	10	-2.827	36.5	8	+3.684*
Low sub. risk	13.1	10	12.3	10	-.919	19.0	10	+1.229	12.9	10	-.205	16.1	10	+2.374*
High obj. risk	12.3	10	8.5	10	-1.547	11.8	10	-.192	12.0	10	-.096	23.8	10	+1.897*
Low obj. risk	14.0	10	12.9	10	-.952	12.5	10	-1.220	12.6	10	-1.065	18.1	10	+2.997*

Distribution of Responses

	By Objective Risk		By Subjective Risk	
	Low Risk	High Risk	Low Risk	High Risk
Yes responses	342	44	405	75
No responses	1980	302	2482	300
	χ^2 = .829(.3625)		χ^2 = 8.960(.0028)*	

*Indicates significance at the 90 percent (two-tailed) level.

Exhibit 20: Percent of consumers indicating that garnishment or wage assignment were acceptable .

Class	Full Sample % Yes	Full Sample Rank	Wisconsin % Yes	Wisconsin Rank	Wisconsin t	Illinois % Yes	Illinois Rank	Illinois t	Arkansas % Yes	Arkansas Rank	Arkansas t	Louisiana % Yes	Louisiana Rank	Louisiana t
All people	39.4	7	40.1	7	-.512	46.6	6	+5.553*	38.0	7	-.912	30.0	8	-6.151*
High sub. risk	35.6	7	34.5	6T	-.243	37.5	7	+.543	29.1	7	-1.723	43.2	6T	+1.476
Low sub. risk	40.2	7	40.9	7	+.519	48.3	6	+5.669*	39.3	7	-.509	29.2	8	-6.770*
High obj. risk	32.4	7	31.1	7T	-.431	37.3	7	+1.210	30.6	7	-1.443	28.6	8T	-.575
Low obj. risk	39.4	7	41.1	7	+1.123	46.6	6	+4.177*	38.4	7	-.497	30.4	8	-5.257*

Distribution of Responses

	By Objective Risk Low Risk	By Objective Risk High Risk	By Subjective Risk Low Risk	By Subjective Risk High Risk
Yes responses	967	116	1238	142
No responses	1353	230	1657	237
	$\chi^2 = 7.770(.0053)$*		$\chi^2 = 3.641(.0564)$*	

NOTE: T refers to a tie

*Indicates significance at the 90 percent (two-tailed) level.

Exhibit 21: Percent of consumers indicating that attorneys fees were acceptable

Class	Full Sample % Yes	Full Sample Rank	Wisconsin % Yes	Wisconsin Rank	Wisconsin t	Illinois % Yes	Illinois Rank	Illinois t	Arkansas % Yes	Arkansas Rank	Arkansas t	Louisiana % Yes	Louisiana Rank	Louisiana t
All people	43.4	6	46.4	5	+2.341*	43.6	7	+.217	46.4	6	+1.958*	35.5	6	-4.969*
High sub. risk	38.1	6	44.8	5	+1.431	41.4	6	+.926	32.7	6	-1.387	32.4	10	-1.136
Low sub. risk	44.4	6	47.0	5	+1.880*	44.4	7	+.019	48.6	5	+2.490*	36.3	6	-4.734*
High obj. risk	41.6	6	48.1	5	+.789	44.1	6	+.600	38.0	6	- .279	28.6	8T	-1.948*
Low obj. risk	43.9	6	46.7	5	+1.657	43.8	7	-.045	50.2	5	+6.177	34.5	6	-5.325*

Distribution of Responses

	By Objective Risk		By Subjective Risk	
	Low Risk	High Risk	Low Risk	High Risk
Yes responses	1074	149	1367	152
No responses	1060	183	1316	209
	χ^2 = 3.197(.0738)*		χ^2 = 9.606(.0019)*	

NOTE: T refers to a tie

*Indicates significance at the 90 percent (two-tailed) level.

Exhibit 22: Percentage of consumers indicating that garnishment of savings accounts was acceptable

Class	Full Sample % Yes	Full Sample Rank	Wisconsin % Yes	Wisconsin Rank	Wisconsin t	Illinois % Yes	Illinois Rank	Illinois t	Arkansas % Yes	Arkansas Rank	Arkansas t	Louisiana % Yes	Louisiana Rank	Louisiana t
All people	64.8	3	69.9	3	+6.427*	55.0	3	-7.585*	70.1	3	+3.673*	65.7	3	+.586
High sub. risk	51.6	4	52.9	4	+.201	50.8	4	-.232	57.3	3T	+1.396	43.2	6T	-1.602
Low sub. risk	66.8	3	71.8	3	+3.913*	55.6	2	-8.008*	72.7	3	+3.769*	68.8	3	+1.207
High obj. risk	53.1	4	55.7	3	+.635	49.0	4	-.965	53.7	4	+.339	54.8	3	+.231
Low obj. risk	66.7	3	71.4	3	+3.19	56.2	3	-7.557*	72.9	3	+.688	66.3	3	-.241

Distribution of Responses

	By Objective Risk Low Risk	By Objective Risk High Risk	By Subjective Risk Low Risk	By Subjective Risk High Risk
Yes responses	1633	190	2058	206
No responses	689	150	835	160
	χ^2 = 28.004(.0000) *		χ^2 = 33.097(.0000)*	

T indicates a tie in ranking.

* Indicates significance at the 90 percent (two-tailed) level.

they might fall behind on their debts said such remedies were acceptable. Chi-squared tests indicate that this difference was significant.

Where the acceptability of remedies was not positively correlated with consumers' fear that they might default on their debts in the future, the unpopularity of certain remedies seemes to reflect more than consumers' latent fear that such remedies might be exercised against them. In particular, consumers' responses may reflect notions of "equity" or "fairness." They also may reflect consumer notions of how much the creditor-debtor relationship should be allowed to influence other aspects of the debtors' life.

In addition to blanket security (and waiver of exemptions on household property) other remedies that were, on balance, unpopular were those that allowed the creditor to contact the debtor's employer (only 27.7 percent would allow this remedy) or ask the employer to garnish the consumers wages (only 39.4 percent would allow this remedy). Generally, these potential remedies were significantly less popular among high-risk customers than for those of low risk. Seemingly, high-risk consumers disliked these remedies because they felt their exercise might jeopardize their jobs. However, low-risk consumers also disliked these remedies. Thus, consumer aversion to these remedies may have basically reflected feelings that creditors should not interfere with a debtor's work relationship.

The last remedy that was decidedly unpopular was the taking of deficiency judgments. Only 33.4 percent of the consumers surveyed thought that deficiency judgments should be permitted. This remedy may be unpopular because consumers believed that the retaking of the item should settle the debt without further proceedings. At any rate, high-risk consumers clearly disliked it more than low-risk consumers.

At the other end of the spectrum, consumers felt that late fees, repossession, phone calls to the debtor, and garnishment of the debtor's savings accounts were highly acceptable remedies. Sixty to 75 percent of all consumers said these remedies should be permitted. Late charges were deemed to be the most widely acceptable of any remedy everywhere except Louisiana. In Louisiana, repossession ranked as the most acceptable remedy. It is interesting, though, that in Louisiana repossession (really replevin there) was not frequently used because it was cumbersome and costly for creditors to exercise.

Two remedies were borderline in terms of their acceptability with consumers: refinancing of outstanding debts to ease repayment terms, and the assessment of creditors' attorneys fees. In both cases, slightly less than half of the consumers found them acceptable. Nonetheless, more consumers found refinancing acceptable than unacceptable. Also, in contrast with other remedies, high-risk consumers were just as favorable toward refinancing as low-risk debtors (Exhibit 14). This probably reflected high-risk debtors' realization that refinancing could help debtors that were financially strapped by reducing their payments. Most likely, negative responses to the refinancing question were provoked because the question specified that the loan would be refinanced only at a higher rate. The disadvantage of the higher rate probably outweighed the advantage of a reduced payment burden in many consumers' eyes.

Systematic interstate variation in consumers' attitudes toward various remedies was not readily discernible. Even though significant interstate differences existed for various remedies, no general pattern related to the remedy environment was observable. Possibly overall attitudes toward remedies represent consumer's notions of fair play more than their knowledge of their specific remedy environment.

Costs Versus Benefits of Creditors' Remedies

A. The Theoretical Issue

The major theoretical issue that exists with regard to creditors' remedies is whether creditors will use remedies that are more costly to consumers than they are beneficial to employers. Johnson[9] argues that they will not. He notes that if the remedy is worth more to consumers than it is to creditors, consumers would pay sufficiently more to obtain a credit contract without the remedy that creditors could gain by eliminating that remedy from their credit contracts. Thus, they would not use such remedies.

On the other side of the issue, the FTC's Bureau of Consumer Protection[10] argues that consumer credit contracts do not allow consumers to bargain away particular remedies because they are "contracts of adhesion." As a result, they believe that markets will not always work perfectly, that consumers cannot "bargain" the remedies away effectively and that consumers may only be able to avoid unpopular remedies if regulators intervene.

B. Empirical Findings

The data presented in this study provide some useful insights related to this argument. Basically what this study shows is that creditors do not highly value, and infrequently use, most of the remedies that are most disliked by consumers. Conversely, creditors are most likely to value and use those remedies that are most acceptable to consumers. Thus, consumers and creditors generally agree on what remedies are acceptable and from the viewpoint of the creditor, desirable.

These findings are documented in Exhibit 23--which compares creditor and consumer rankings of various remedies. That exhibit shows that consumers dislike and creditors rarely value blanket security and waiver of exemption clauses. At the other extreme, creditors highly value, and consumers do not dislike, repossessions, foreclosure, and the assessment of late fees.

Conflicts of interest between consumers and creditors exist on garnishment, which creditors appear to value most highly of all remedies, and which consumers rank seventh out of ten remedies in acceptability. While 39.4 percent of consumers feel garnishment should be allowed, 54.5 percent are opposed to its use. Clearly, in this area, creditors and consumers have conflicting interests.

Lesser conflicts of interests occur with other employer contacts. Creditors generally do not value wage assignments nearly as highly as they value garnishment. However, wage assignment is one of the more important remedies for credit unions, retailers, and finance companies. Thus, the NCCF recommended that wage assignments be permitted on a restricted basis for certain types of credit. Further, while creditor contacts with employees, in general, are disliked by consumers, such contacts are not widely desired by creditors other than credit unions and retailers. Thus, except for "skip-tracing," it would appear that creditors, in general, may not widely use employer contacts.

Lesser degrees of conflict between consumers and creditors may exist with regard to several other remedies. Consumers dislike

Exhibit 23: Consumer vs. Creditor Evaluation of Remedies

	Consumer Acceptability			Consumer willingness to pay for protection			Creditor Popularity
Remedy	Rank	Percent Yes	Percent No	Percent Willing	Grand Mean (/$4000)	Adjusted Mean (/$4000)	Rank
Late fees	1 of 10	75.7%	20.3%	18.8%	0.2%	0.8%	2 of 14
Repossession or	2 of 10	70.1%	24.0%	17.6%	0.4%	2.3%	4 of 14
Foreclosure							6 of 14
Garnish savings	3 of 10	64.8%	28.6%				
Phone calls	4 of 10	60.2%	35.5%				
Refinance (at higher rate)	5 of 10	46.8%	44.7%				
Assess attorney's fees	6 of 10	43.3%	43.9%	18.4%	0.4%	2.0%	3 of 14
Garnish wages or	7 of 10	39.4%	54.5%				1 of 14
Wage assignment	7 of 10						10 of 14
Deficiency judgment	8 of 10	33.4%	56.4%	16.9%	0.4%	2.3%	9 of 14
Employer contacts	9 of 10	27.7%	67.4%				11 of 14
Blanket security	10 of 10	13.9%	79.6%				13 of 14
Waiver of exemption							14 of 14

deficiency judgments while creditors, particularly banks and savings and loan associations, feel they are useful. Similarly, consumers are lukewarm about the assessment of attorney's fees, while creditors, particularly retailers, credit unions, and savings and loan associations highly value such fees. Although one creditor has observed that "if you can't collect the balance, you can't collect attorney's fees," they still may be useful for collection purposes. In particular, this survey, and previous econometric evidence[11] that supports their efficacy suggests that attorneys fees may be helpful to many creditors--if only because solvent debtors would rather repay a loan promptly than pay extra charges for attorneys fees.

C. Resolving Conflicts

1. Resolving the theoretical conflict.

The data presented in this study suggest that, even if remedies are retained in credit contracts, they will not be used if in general they are less valuable to creditors than they are to consumers. The BCP may be correct in maintaining that bargains over remedies will not be struck on an individual basis. Nonetheless, creditors' generally will not use unpopular remedies because they stand to lose substantial customer "goodwill" if they exercise such a remedy.

While consumers may not understand the "legalese" in a credit contract, they do know if creditor X did "right" or "wrong" to their friend or relative. Creditors that "wrong" customers frequently will soon find that their potential clientele is diminished. Eventually such creditors will find they only have truly desperate credit applicants who could not get credit elsewhere and opted for an "unfair" legal lender as a last resort before applying to even more repressive illegal loan sharks. Thus, to preserve their market share creditors must retain consumers' "goodwill." This fact, taken in conjunction with equation (1), suggests that creditors will not use unpopular remedies very frequently--even if they have the legal right to do so. Using such a remedy will generally cost the creditor more in terms of lost "goodwill" than it will gain them in terms of recoveries on bad debts.[12]

This analysis can explain why,in general, creditors value most highly those remedies that are most acceptable to consumers and value least those remedies least liked by consumers. Consequently, even if a particular remedy should be in the credit contract, it is unlikely to be used, except possibly in the case of recalcitant debtors, if it is highly unpopular with consumers. Because of "goodwill" considerations it is not necessary for the vast majority of consumers either to eliminate all remedies from credit contracts through legislative fiat or to bargain directly with creditors to eliminate specific remedies. If the potential goodwill loss to the creditor using a remedy is sufficiently high, that creditor will not ordinarily exercise that remedy, even if it is legally available to him.

2. Resolving Other Conflicts

The "goodwill" mechanism we have described explains why creditors are likely to value most highly those remedies that are most acceptable to consumers, and vice versa. However, it does not predict what is likely to happen if consumers do not like a remedy, but consumers find it highly useful--i.e., both GWL and R-C_r in equation (1) are large. In that case, a substantial number of consumers may dislike a remedy but creditors may use it anyway because of its collection value. Such remedies could include wage garnishment--which was most highly valued by creditors but disliked by a majority of consumers--and the assessment of creditors' attorneys fees--which was highly valued by creditors, but was only moderately acceptable (equally liked and disliked) by consumers.

One possibility here could be that consumers that disliked the remedy intensively could negotiate such clauses out of their debt contracts. This is not generally practical, however, because such negotiations are costly and the negotiation process alone might add more to the cost of the contract than the consumer would save by eliminating the remedy. In addition, creditors would be unlikely to negotiate individually on such remedies because they would suspect that consumers who wished to negotiate had elevated probabilities of default.

Nonetheless, the market could adjust to such a situation. If a sufficient number of consumers wished to obtain credit contracts without a particular remedy, and were willing to incur the search costs and pay the extra charge necessary to obtain such contracts, some creditors could prosper by offering such contracts at a premium price.

Clearly, the data presented in Exhibit 23 suggest that a relatively large percentage of consumers, 54 and 43 percent, respectively, do not believe creditors should be allowed to garnish wages or assess attorneys fees. However, only a relatively small percentage of consumers were willing to pay extra for such protection (18.4 percent were willing to pay extra to escape attorneys fees) and their willingness to pay was quite low (2.0% of the contract value for those willing to pay and 0.4% for consumers as a whole). As a result most consumers would not be willing to incur the search costs necessary to locate a creditor who did not use those remedies. Further, most consumers would not likely be willing to pay such creditors enough extra so that they could profitably eliminate such remedies from their credit contracts.

In the absence of market-induced abolishment of remedies, regulators or legislators have often banned or restricted various remedies. This may or may not lead to an improvement in consumer welfare. It will lead to an improvement in consumer welfare only if the gain to consumers exceeds the added cost to creditors, and high search costs or transactions costs have made it unprofitable for creditors to offer credit without the remedy. Legislation will reduce consumer welfare if the gain to consumers is less than the extra cost consumers must pay to compensate creditors for the extra collection costs or losses they incur without the remedy.

In short, the gains to legislation can be measured in terms of search cost and transaction cost economies that some consumers may realize if legislative uniformity is imposed. In the absence of rate ceilings, if net gains are positive, one would expect the total quantity of credit used to expand when remedies were restricted. If net gains are negative one would expect total remedy use to contract. This is illustrated by Exhibit 24.

Exhibits 24A and 24B illustrate cases where legal restrictions on remedies are imposed. In both Exhibits 24A and 24B, elimination of the remedy causes the supply of credit curve to rise sharply as creditors seek to recoup the extra collection costs and losses they incur in the

Exhibit 24A

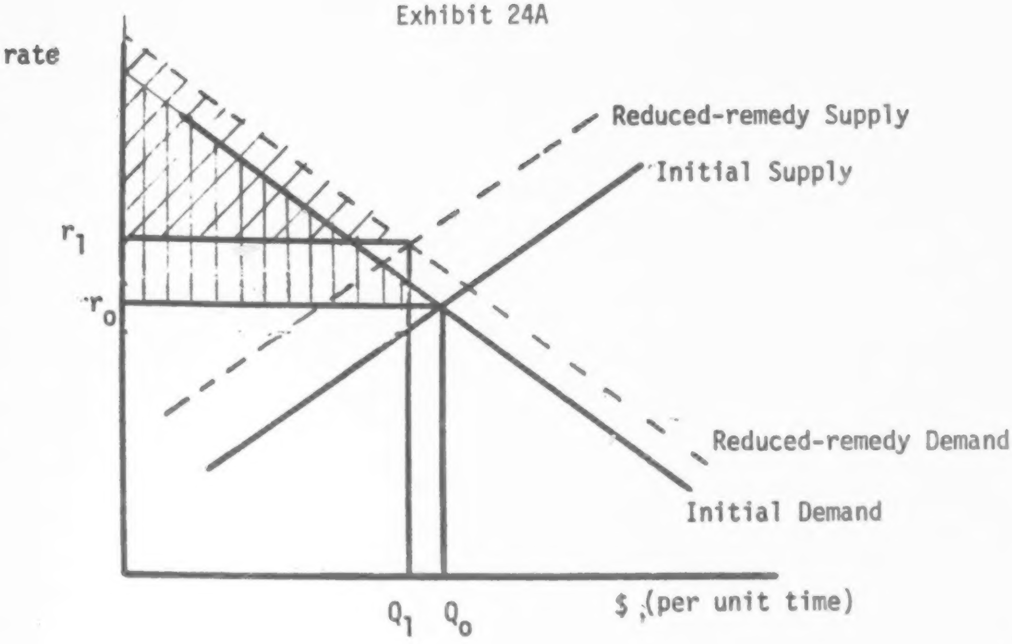
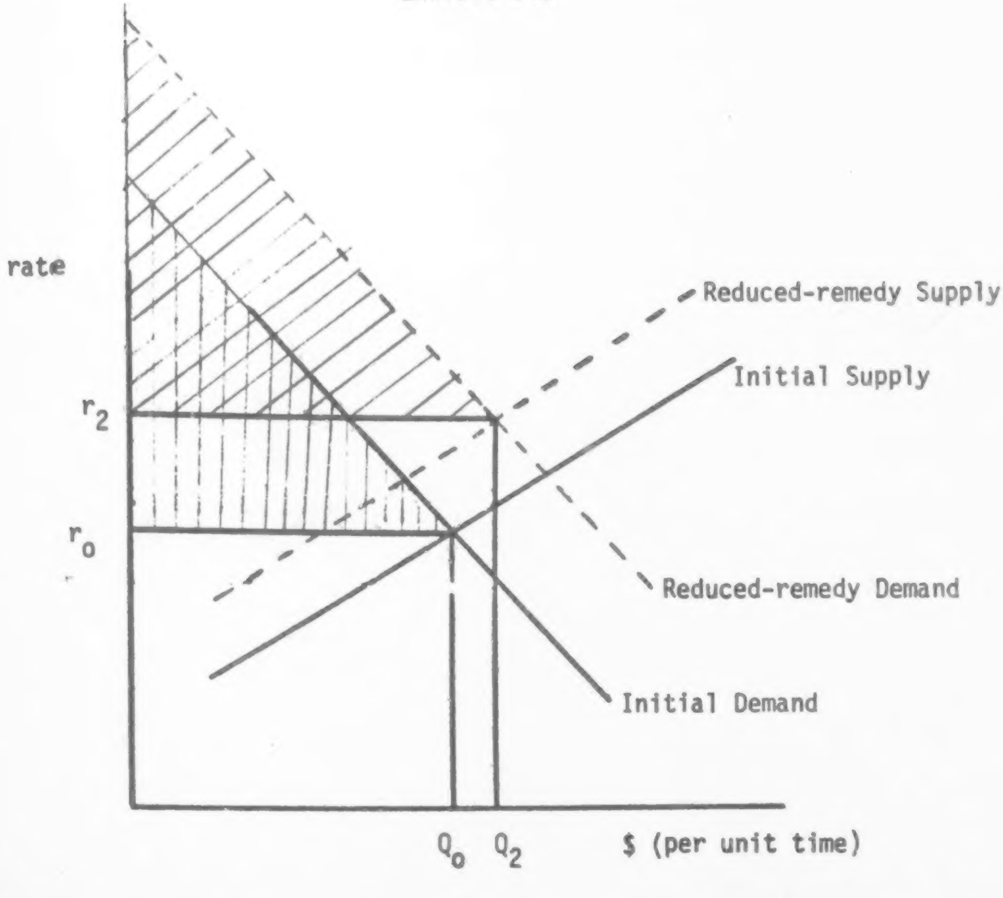


Exhibit 24B



absence of the remedy. At the same time, credit demand increases as consumers are willing to pay more to borrow if they do not fear that the remedy will be imposed. In Exhibit 24A, the reduction in supply exceeds the increase in demand. Less credit is available at higher rates. In Exhibit 24B the reduction in supply is less than the increase in demand. More credit is demanded even though rates increase.

If we assume linear demand curves with invariant constant slopes in each case, it is possible to conclude that consumers surplus will decrease in Exhibit 24A (as the "new," diagonally shaded, area of consumers surplus under the demand curve is smaller than the "old," vertically shaded area). However, in Exhibit 24B, following a similar line of reasoning, "consumers surplus" will increase. Thus, legislated restrictions on remedies generally will reduce consumer welfare if the new equilibrium quantity of credit is less than the old equilibrium quantity, and increase consumer welfare if the equilibrium quantity demanded increases.

Because our survey shows that creditors value garnishment and attorneys fees highly and the majority of consumers do not appear to be willing to pay much for various remedy protections, one would expect that legal abolishment of such remedies would lead to a greater reduction in supply than increase in demand. Thus, the quantity of credit would fall and, under the assumptions made above, consumers surplus (welfare) would be reduced. Previous analysis of NCCF data is consistent with this hypothesis. Both Greer and Peterson and Frew found that prohibitions against attorneys fees and garnishment were associated with reductions in the quantity (dollar volume or number) of personal loans made in a given state.[13]

Thus, we conclude that in cases where creditors continue to use a relatively unpopular remedy they do so because its value to them exceeds the value to consumers. Prohibition of such remedies, therefore, will lead to reductions in aggregate credit use and in consumer welfare.

We also conclude that if a creditor does not value a remedy highly for collection purposes and it is disliked by most consumers the creditor will not value the remedy highly or use it frequently--for fear of losing customer goodwill.

VI. Summary and Conclusions

This paper has investigated creditor use and evaluation of remedies as well as consumer valuation and willingness to pay for remedies in four states with substantially different remedy environments.

It observed that:

(1) Creditors used tough collection remedies sooner and more frequently in states with low legal loan rate ceilings.

(2) Creditors used remedies least frequently in a state with high rate ceilings where remedies were costly to exercise.

(3) Creditors valued some remedies much more highly than others.

(4) Consumers in general were not very willing to pay for protection against the exercise of various collection remedies.

(5) While consumers who expected they might fall behind on their debts were more willing to pay for remedy protection than others, even they were not willing to pay much for such protections, and the majority were not willing to pay anything at all.

(6) The state-wide remedy environment strongly influenced consumers' willingness to pay for various remedy protections. Consumers were least

willing to pay for protection where creditors' remedies were weakest and "tough" remedies were least frequently used. They were most willing to pay for remedy protection where statutory remedies were least restricted or "tough" remedies were most frequently used.

(7) Consumers clearly learned about remedies through experience. If they had previously fallen behind on their debts in a state where "tough" collection activities were used, they were more willing to pay for future remedy protections. Conversely, if they had found through experience that certain remedies were not used or were not onerous in a particular state, they were willing to pay less for protection against the exercise of such remedies.

(8) Consumers found some remedies far more acceptable than others. Interestingly enough, many of those remedies were also highly valued by creditors. Conversely, if consumers strongly disliked various remedies, creditors generally did not favor them either. These observations suggest that creditors will not use remedies frequently if they fear they will lose substantial goodwill by doing so.

(9) In cases where creditors valued remedies highly, but consumers did not, a potential conflict existed. Analysis of NCCF data suggests that where legislative action to prohibit such remedies was taken, a loss of welfare seemingly resulted. This result suggests that creditors will use unpopular remedies only when they feel the net gain from doing so exceeds consumers' willingness to pay for contracts that lack that remedy.

(10) Overall, the evidence presented in this paper suggests that markets adapt to both creditor and consumer evaluation of remedies. If

consumers strongly dislike a remedy, creditors are unlikely to value it highly as a collection device. However, if consumers have mixed feelings about a remedy and creditors feel it is effective, that remedy will continue to be used unless it is banned by legislative fiat.

FOOTNOTES

[1] See National Commission on Consumer Finance, Consumer Credit in the United States; Report of the National Commission on Consumer Finance, Washington, D.C.: Government Printing Office, 1972; National Commission on Consumer Finance, Creditors' Remedies and Contract Provisions: An Economic and Legal Analysis, Technical Studies Volume V, by Douglas F. Greer; National Commission on Consumer Finance, Washington, D.C.: Government Printing Office, 1973; and National Commission on Consumer Finance, An Econometric Analysis of Consumer Credit Markets in the United States, Technical Studies Volume IV, edited by Douglas F. Greer and Robert P. Shay, Washington, D.C.: Government Printing Office, 1973.

[2] See Shay, Robert P. "Testimony at FTC Hearings on the Proposed Trade Regulation Rule on Credit Practices," Hearing Exhibit 494, Federal Trade Commission, Washington, D.C. 1968; and Barth, James A. and Anthony M.J. Yezer, "Testimony at FTC Hearings on the Proposed Trade Rule on Credit Practices," Hearing Exhibit 505, Federal Trade Commission, Washington, D.C. 1978.

Barth and Yezer, often in conjunction with others, have done a number of related studies. These include:

Barth, James and Anthony Yezer, "The Economic Impact of the Federal Trade Commission Proposals for Credit Contract Regulations on the Cost and Availability of Consumer Credit," Bureau of Social Science Research, Inc., Washington, D.C., 1977;

Aho, Michael, James Barth, Joseph Cordes and Anthony Yezer, "Regulations' Impact on the Cost/Availability of CRedit," Journal of Consumer Credit Management, Winter, 1979; and

Barth, James, Padma Gotur, Neela Manage, and Anthony Yezer, "A New Approach to Estimating the Impact of Regulations on Personal Loan Markets," Economic Discussion Paper, George Washington University, 1980.

[3] See Peterson, Richard L. "The Impact of Restricted Creditors' Remedies on Automobile Finance Companies in Wisconsin, Working Paper No. 12. Credit Research Center, Purdue University, West Lafayette, Indiana, 1977;

Peterson, Richard L. "Changes in Finance Company Personal Loan Policies following Enactment of the Wisconsin Consumer Act," Working Paper No. 13, Credit Research Center, Purdue University, West Lafayette, Indiana, 1977;

Peterson, Richard L. and James A. Frew, "Creditor Remedy Restrictions and Interstate Differences in Personal Loan Rates and Availability: A Supplementary Analysis," Working Paper No. 14, Credit Research Center, Purdue University, West Lafayette, Indiana, 1977; and

Dunkelberg, William C. "Banks' Lending Response to Restricted Creditors' Remedies," Working Paper No. 20, Credit Research Center, Purdue University, West Lafayette, Indiana, 1978.

Footnotes (continued)

[4] Johnson, Robert W. Cost/Benefit Analysis of Creditors' Remedies: Monograph No. 12, Credit Research Center, Purdue University, West Lafayette, Indiana, 1978.

[5] See Federal Trade Commission, Bureau of Consumer Protection, Memorandum in support of a Trade Regulation Rule on Credit Practices, 1974 and;

Federal Trade Commission, Bureau of Consumer Protection, Credit Practices; Staff Report and Recommendations on Proposed Trade Regulation Rule 16 CFR Part 444: Public Record 215-42. and

Barth and Yezer (1977) op. cit.

[6] Caplovitz, David, Debtors in Default, Bureau of Applied Social Research, Columbia University, New York, 1970; and

Caplovitz, David, Consumers in Trouble: A Study of Debtors in Default, The Free Press, New York, 1974.

[7] If the questions were stated in monthly payment form, it would be necessary to convert that information to a present value. The pretest suggested that consumers seemingly varied widely in terms of time preference or in their ability to express a time preference. Thus, the appropriate discount rate is hard to determine. Further, even the present value of monthly payments cannot be cumulated over the full life of the loan if a consumer expects he may default (with non-zero probability) at some indefinite time in the future.

[8] Unrealistically large responses were defined as responses that exceeded the maximum value of the remedy. For instance, in Exhibit 9 (question M18 in Exhibit 7) the consumer is told the remedy protection may save him up to \$300. Thus, any response over \$300 is clearly more than the possible present value of the remedy--and even \$300 is too high (although, we included it) for someone with positive time preference. Similarly, if the maximum late charge is \$5 per month (as it usually is, except in Wisconsin where it is \$3), the maximum saving from a non-pyramided \$1 late fee is 48 x (\$5-\$1) or \$196. Thus, in the late fee question (M19) we deemed responses over \$200 to be unrealistically high. In questions M20 and M21 on repossession and deficiency judgments, we assumed the maximum realistic savings from the remedy protection would be \$500, since the consumer was told that was the difference between what the car was worth and the remaining amount of the hypothetical debt.

[9] Johnson, op. cit.

[10] FTC Bureau of Consumer Protection, Memorandum, op. cit.

Footnotes (continued)

[11] See Peterson and Frew, op. cit, and Peterson, Richard L. and Michael D. Ginsberg, "Regulatory Influences on Commercial Bank Personal Loan Rates," Proceedings of a Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, 1977, and NCCF (Greer) op.cit.

[12] One exception could exist if the creditor used the remedies to signal they would be "tough" with delinquent debtors who flaunted their non-payment of debts. For instance, in response to the survey, one creditor said he would work with debtors who were willing to pay but would take every action possible to collect a debt if a debtor were not concerned about repaying the debt.

[13] Peterson and Frew (op. cit) and NCCF (Greer) op.cit.

Credit
Research
Center

WORKING PAPER NO. 42
Consumer Use of Mortgage Credit
1981

Krannert Graduate School of Management – Purdue University

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CONSUMER USE OF MORTGAGE CREDIT

Richard L. Peterson and A. Charlene Sullivan*

Abstract

This paper analyzes factors influencing consumers' use of mortgage credit for consumer purposes. It primarily concentrates on consumers' use of first mortgage funds to finance consumer durables purchased with the home.

Two alternative and conflicting hypotheses are tested. The "relative price" hypothesis predicts that consumers in markets with low consumer rate ceilings will use more consumer credit relative to mortgage credit for consumer purposes because it is relatively cheaper than mortgage credit than in states with higher rate ceilings. The "credit-rationing" hypothesis implies that high-risk consumers will find mortgage-related credit more available than consumer credit--particularly in states with low rate ceilings on consumer credit. The "relative price" hypothesis can apply either at the individual ("micro") level or for all individuals taken together (at the "macro" level). At the macro level, the credit rationing hypothesis directly conflicts with the relative price hypothesis.

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The study uses data collected in four markets which differ significantly according to applicable rate ceilings on consumer credit. It analyzes the amount of mortgage credit used to finance household durable goods expenditures relative to total first mortgage debt, total consumer debt, and total credit card debt.

In general, mortgage credit was an important source of funds for the purchase of household durables for high-risk (low income) homeowners who may have been rationed out of the consumer credit market. Thus, the credit rationing hypothesis was supported at the "micro" level.

However, possibly because low consumer rate ceilings held down the price of consumer credit and encouraged consumer credit use by those who could still obtain it, consumer credit was used more extensively relative to mortgage credit for consumer purposes in states with low rate ceilings than in states with high rate ceilings. Holding credit risk and income constant, homeowners in markets with low rate ceilings on consumer loans used a significantly lower percentage of their first mortgage credit to finance durables than homeowners in high-rate markets. Also, compared to those in high-rate markets, homeowners in low-rate markets held less mortgage credit for consumer purposes relative to total consumer credit and significantly less mortgage credit for consumer purposes relative to unsecured credit card debt in their portfolios. Thus, on the aggregate ("macro") level the data are consistent with the relative price hypothesis.

CONSUMER USE OF MORTGAGE CREDIT

Richard L. Peterson and A. Charlene Sullivan

I. Introduction

Credit is fungible. Consumers typically use mortgage credit to finance their purchases of real property. However, they may use any of several sources of credit when they wish to finance consumer expenditures on durables. To the extent that mortgage credit is used extensively to finance the purchase of consumer durables, a greater volume of mortgage credit would have to be originated to finance the same volume of real property acquisition.

Previous investigators have examined whether first and second mortgage credit was used entirely to finance new home construction or whether some was used for other purposes, such as relocation costs.[1] However, no one specifically addressed the issue of whether mortgage credit was directly substituted for consumer credit in financing specific consumer expenditures.

In this paper we analyze the extent to which mortgage credit may be substituted for consumer credit to finance household durable goods. We are particularly concerned with analyzing whether consumer credit rate ceilings affect the ability and willingness of differently situated consumers to use mortgage credit in lieu of consumer credit to finance such purchases.

The paper develops two major conflicting hypothesis in section II. The first, the relative price hypothesis, suggests that consumers will use more consumer credit relative to mortgage credit when the price of consumer credit is held down by consumer loan rate ceilings. The second, the credit rationing hypothesis, has both "micro" and "macro" implications. On the individual or "micro" level it implies that low income (high-risk) consumers will substitute mortgage credit for consumer credit where possible. On the "macro" level, it predicts that consumers in total will use more mortgage credit relative to consumer credit to finance durable expenditures in states with low rate ceilings. On the "macro" level, the relative price and credit rationing hypotheses are in direct conflict.

The data used to test the alternative theories of consumer and mortgage credit use are described in section III. The alternative theories of credit use are tested empirically in section IV. Finally, section V summarizes the major findings of the paper and presents our conclusions.

On the aggregate ("macro") level, the empirical findings support the relative price hypothesis. Consumers use more consumer credit relative to mortgage credit to finance household goods acquisitions in states with low consumer credit rate ceilings than in states with higher rate ceilings for consumer credit. However, the credit rationing hypothesis was supported on the "micro" or individual level. High-risk, low-income people used more mortgage credit relative to other forms of credit to finance durable goods acquisitions.than more affluent consumers.

II. Mortgage/Consumer Credit Substitution

The Relative Price Hypothesis

Ordinarily a consumer can elect to borrow from any of a number of different sources. While many of the sources will offer identical loan terms, others will offer loans with varying sizes, rates, repayment features, collateral requirements, or convenience attributes. The source a consumer selects to finance expenditures will depend upon all of the attributes just enumerated.

As a general rule consumer credit is readily available at the retail point-of-sale to finance expenditures on major durable goods. Consumer credit typically is of short maturity (two to five years), has little or no repayment penalty if it is repaid early, can be acquired at low transaction cost on the consumers part (often at the point of sale), and has infrequent or low downpayment and collateral requirements. In contrast, mortgage loans typically are of long maturity (25-30 years), often carry prepayment penalties, are costly to acquire, and have very substantial collateral requirements (the typical mortgage loan is secured with real property worth 125 percent of the value of the loan).

These inherent differences in consumer and mortgage debt induce consumers to pay higher rates to acquire consumer credit than to obtain mortgage credit. They are willing to pay the higher rate for consumer credit because they gain greater convenience and portfolio flexibility for lower transactions costs.

Given the relative prices of consumer and mortgage credit, consumers will select their debt portfolios so as to maximize their expected welfare. If the price (rate) associated with either form of credit (consumer and mortgage) increases, one would expect them to alter their portfolio structure to acquire relatively more of the cheaper form of debt. This is illustrated in Exhibit 1.

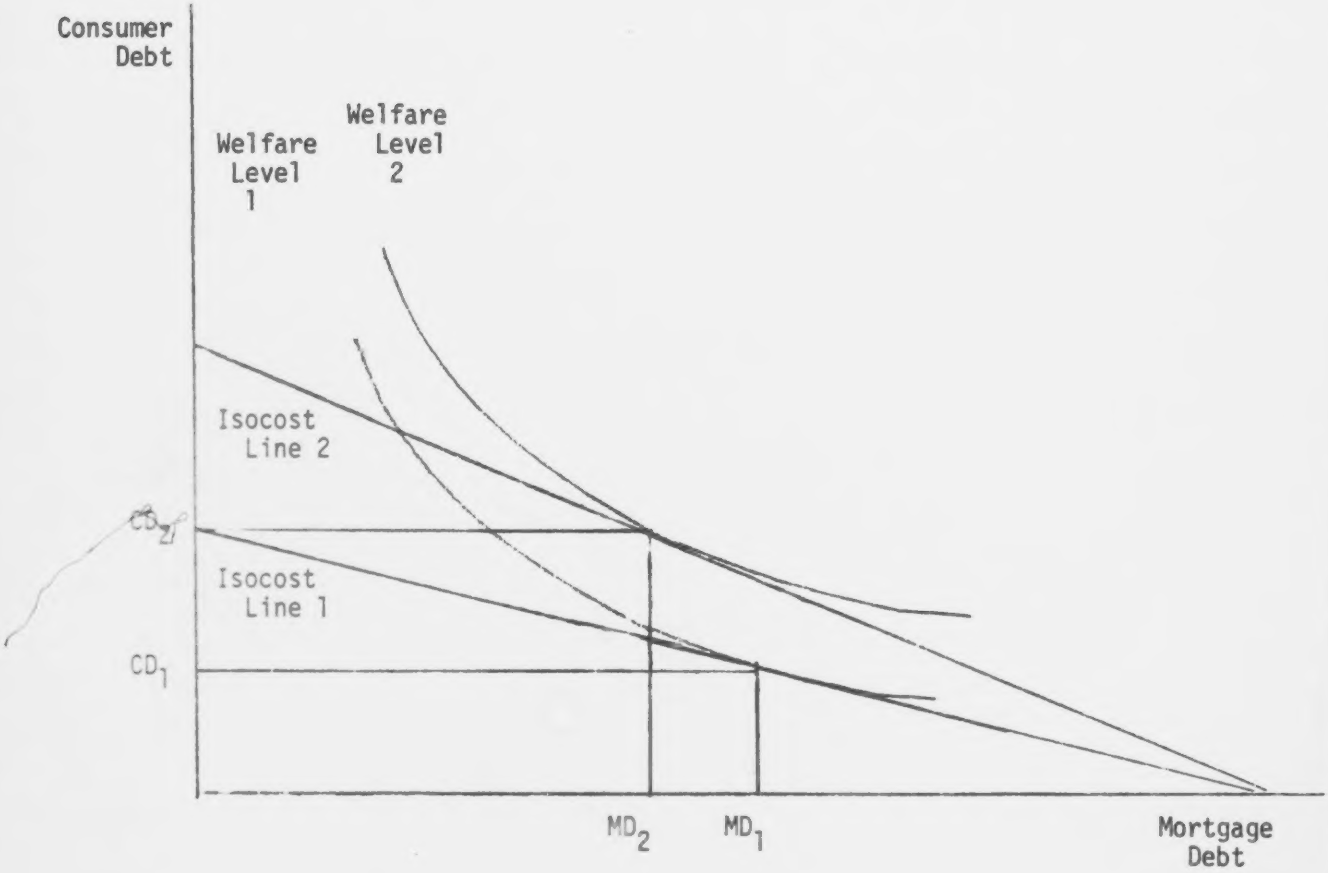
In Exhibit 1, we assume that tradeoffs exist between consumer credit and mortgage credit. These tradeoffs are given by the isocost lines. The slopes of the isocost lines reflect tradeoffs between consumer debt and mortgage debt that can be made without increasing total borrowing costs (finance charges per year). For instance, if mortgage debt carried a 12 percent finance rate and consumer debt carried a 24 percent rate, two dollars of mortgage debt could be acquired for each dollar of consumer debt given up--and total debt costs would remain the same.

The consumer tries to adjust holdings of consumer and mortgage debt so as to achieve the highest level of welfare consistent with each level of borrowing costs. For instance, if isocost line 1 reflects relevant cost tradeoffs between consumer and mortgage debt, the consumer can obtain the maximum level of welfare consistent with those borrowing costs by holding MD_1 in mortgage debt and CD_1 in consumer debt.

The tradeoffs embodied in isocost line 1 of Exhibit 1 assume that consumer debt is expensive relative to mortgage debt. Thus, consumers will probably hold a larger proportion of mortgage debt relative to consumer debt. If consumer debt were to become cheaper while the cost of mortgage debt remained unchanged, isocost line 1 would rotate upward to become isocost line 2. In that case, the consumer could obtain the maximum level of welfare for a given level of borrowing costs by holding MD_2 in mortgage debt and CD_2 in consumer debt. Because of the lower relative price of consumer debt the consumer would substitute some consumer debt for mortgage debt in the debt portfolio.

EXHIBIT 1

CONSUMER AND MORTGAGE DEBT HOLDINGS


Consumer Debt
Welfare Level 1
Welfare Level 2
Isocost Line 2
Isocost Line 1
CD_2
CD_1
MD_2
MD_1
Mortgage Debt

There are two key points that should be derived from this exercise. First, because of the convenience, flexibility, short maturity and low collateral requirements of consumer debt, consumers ordinarily will achieve their highest welfare when they hold some consumer debt in addition to mortgage debt. They generally will do so even if the consumer debt is priced higher than mortgage debt. Second, as the price of consumer debt falls relative to the price of mortgage debt, consumers generally will expand their holdings of consumer debt relative to their holdings of mortgage debt. This gives us our relative price hypothesis--which is -- consumers will hold more consumer debt relative to mortgage debt when the cost of consumer debt is relatively low.

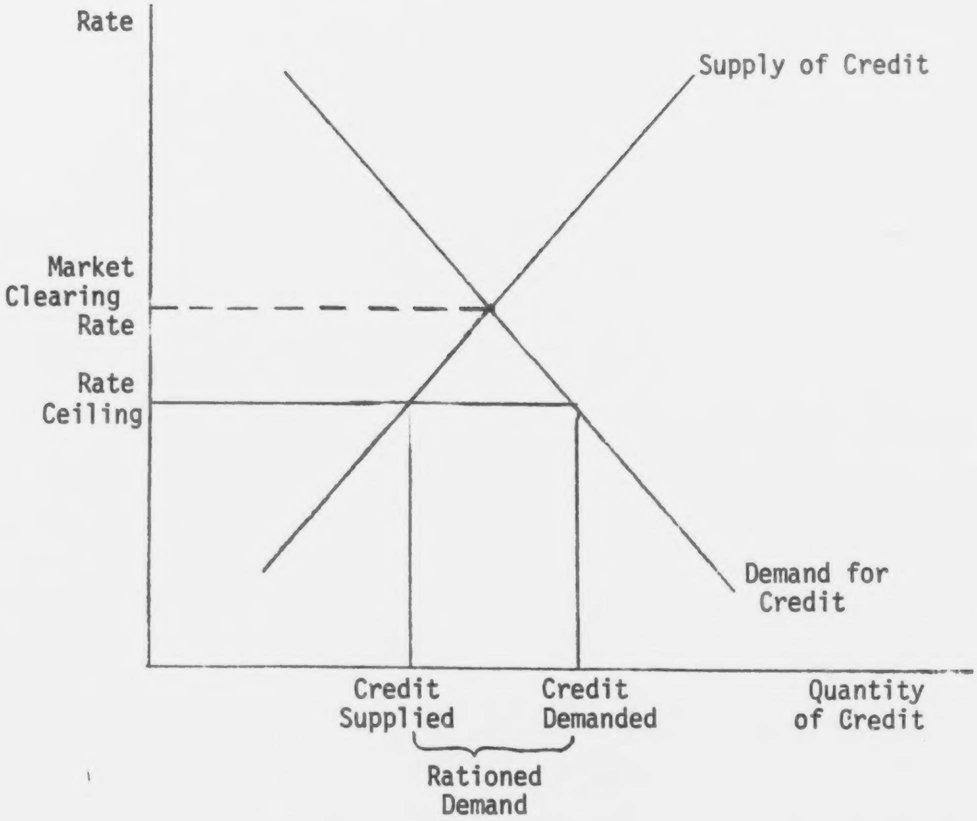
The Credit Rationing Hypothesis

One mechanism by which apparent consumer credit costs can be reduced is through the imposition of restrictive loan rate ceilings. Theoretically, most investigators agree that, unless some way can be found to "evade" the effects of the ceilings, low loan rate ceilings will reduce the supply of consumer credit--as illustrated in Exhibit 2.[2]

In Exhibit 2, in the absence of rate ceilings, the amount of credit creditors would be willing to supply would equal the amount that consumers demanded at the market clearing rate. If the rate ceiling were set below the market clearing rate, suppliers would be willing to supply less credit than consumers would demand. This excess demand would have to be "rationed" out of the market. Typically, credit suppliers ration demand by denying credit to the highest risk, highest-cost potential borrowers. Such borrowers often have low incomes or other signs of limited ability to repay debt. Thus, credit rationing is likely to

EXHIBIT 2

IMPACT OF EFFECTIVE CONSUMER LOAN RATE CEILINGS


Rate
Supply of Credit
Market Clearing Rate
Rate Ceiling
Demand for Credit
Credit Supplied
Credit Demanded
Quantity of Credit
Rationed Demand

fall hardest on those customers who are of highest risk or lowest income. However, if such borrowers were able to obtain mortgage credit by pledging their homes as collateral, one might expect them to substitute mortgage debt for consumer debt to finance needed purchases.

Thus, we have our "credit rationing" hypothesis--which is--consumers who are rationed out of the consumer credit market will be more likely than other consumers to use mortgage debt as a substitute for consumer debt. At the individual ("micro") level, we would expect high-risk, low income consumers, who have the most trouble obtaining credit at any rate, to be most likely to substitute mortgage credit for consumer credit out of necessity. At the aggregate ("macro") level we would expect more consumers to substitute mortgage credit for consumer credit in states where rate ceilings are low and credit rationing is most prevalent.

Implications of these Hypotheses

There are several implications of these hypotheses that are of considerable interest. First, the relative price hypothesis suggests that, insofar as rate ceilings on consumer credit are restrictive, consumer credit usage will be higher relative to mortgage credit usage in states with low rate ceilings than in states with high rate ceilings.[3] Second, the credit rationing hypothesis suggests that, insofar as consumer loan rate ceilings cannot be easily "evaded," on the "macro" level, more consumers will be rationed out of the consumer credit markets in states with effective low rate ceilings than in states with high rate ceilings. Such consumers will be likely to substitute mortgage credit in their portfolio to supply their credit needs. Third, on the "micro" level, the credit rationing hypothesis suggests that, insofar as low-income, high-risk customers are most likely to experience credit rationing in the consumer credit markets, they are the most likely to substitute mortgage credit for consumer credit to meet their credit needs.

It is pertinent to note that the first and second "implications" described above are diametrically opposed. The relative price hypothesis suggests that consumers will use more consumer credit relative to mortgage credit in states with low consumer loan rate ceilings, while, on the "macro" level, the credit rationing hypothesis implies just the opposite. The appropriateness of each hypothesis, then, can only be settled through empirical tests.

Testable Hypotheses

The relative price and credit rationing hypotheses can be tested by analyzing the debt portfolios of similarly situated consumers located in states with different rate ceilings. Buying consumer goods in or with their home provides an important way that consumers can directly use mortgage debt to finance consumer expenditures. If the credit rationing hypothesis holds at the micro level, one would expect the portion of first mortgage credit used to finance purchases of consumer goods to increase as credit risk increases. Further, holding other things constant, if consumers finance more expenditures with mortgage debt, we expect them to use less consumer debt, including credit card debt, to finance the purchase of consumer goods. Thus, if many consumers are rationed out of the credit markets by low rate ceilings, at the "macro" level we expect people to use more mortgage debt relative to consumer debt to finance their acquisition of consumer goods.

Conversely, if the relative price hypothesis applies to the macro level, we would expect consumers to use less mortgage credit relative to consumer credit, including credit card credit, to finance their consumer expenditures in states where consumer loan rate ceilings are low. To test these hypotheses, we developed several measures of the relative extent to which consumers used mortgage credit and consumer credit to finance their expenditures.

III. Nature of the Data

The data used in this analysis were collected in personal interviews conducted in the first six months of 1979 with 3,572 heads of household in four markets. The markets were selected to be maximally different with respect to rate ceilings on consumer loans but minimally different with respect to such factors as industrial base, blue collar/white collar mix and economic environment. The cities where interviews were conducted, the number of interviews completed, and applicable rate ceilings in each market are shown in Exhibit 3. Respondents to the survey provided data concerning their assets, liabilities, durable goods owned, the means by which various durables had been obtained, and extensive demographic information.

Consumers may obtain mortgage credit for consumer purposes through a second mortgage or by refinancing a first mortgage. Data regarding the incidence, size, and purpose of first mortgage refinancings and second mortgage loans were collected. However, less than three percent of our sample, (five percent of the homeowners) had a second mortgage and less than three percent had refinanced a first mortgage. The small number of cases limited our ability to evaluate factors affecting consumers' use of these sources of mortgage funds to finance consumer purchases.

EXHIBIT 3

APPLICABLE RATE CEILINGS IN EARLY 1979

Market Studied	Little Rock/ North Little Rock, Arkansas	Waukegan/ North Chicago Illinois	Lake Charles Louisiana	Racine/Kenosha Wisconsin
Number of Households Interviewed	787	1,030	749	1,006
First Mortgage Rate Ceiling	10%	11%	12%	12%
Consumer Loan Rate Ceilings				
Overall	Low	Generally High	High	Generally Low
Bank Credit Cards	10%	18%	18%	18% to $500 12% over $500
New Autos (36 mo.)	10%	14.55%	15%	12.83%
Installment Sales ($1,000 for 24 mo.)	10%	25.91%	24%	16.29%
Personal Loans ($1,000 for 24 mo.)	10%	Small Loans 25.56% Instalment Loan Law 12.91%	35.43%	Wisconsin Consumer Act 16.29% Discount Loan Act 20.40%

Source of rate ceiling information: Gushee, Charles, Ed. Cost of Personal Borrowing in the United States, Financial Publishing Company, Boston, 1978.

Another more common means by which consumers use mortgage credit to finance consumer purchases is to acquire home appliances and household goods with a house. In order to evaluate this activity each respondent who owned a home was asked to indicate the major household goods they owned and which of those items were obtained with their home.[4] From these data, we calculated a value for each respondent of "implied consumer credit (ICC)." The total dollar value of durables purchased with the home was called implied consumer credit (ICC). If mortgage credit had been used to finance the housing purchase, ICC represents the amount of credit that was used to finance the acquisition of consumer goods.

Implied consumer credit in a respondent's portfolio was computed by assigning values to those household goods that had been purchased with the dwelling unit and summing those values. The respondents were not asked to indicate the value of those durables purchased with the home. Therefore, to approximate a value for "implied consumer credit," each item was assigned a base value equal to the mean price listed for that item in the 1979 Sears catalogue. This particular pricing mechanism was chosen because Sears merchandise was evaluated as being representative of that owned by the "average" U.S. household. These values were then adjusted to reflect probable differences in the quantity and quality of durables owned by households in different income groups and wholesale price discounts or depreciation.

Respondents were grouped into three annual income categories: under \$7,500; \$7,500-24,999; and \$25,000 or more. The value of durables owned by high-income families was set at 150 percent of the mean Sears price. Conversely, the value of durables owned by families in the low-income bracket was set at 50 percent of the Sears price. The durables owned by families from the middle income group were valued at the average Sears price.

Because not all durables were considered to be worth the then current retail values, the value of the durables purchased with the home was reduced by a factor of one-half. This adjustment allowed for wholesale price discounts and depreciation. In this fashion we calculated a value, as of the time of the study, for the durable goods that each consumer had acquired with their home.

In our analysis of ICC, the sample included only those respondents who had moved into their homes between 1976 and 1979. This segmentation of the sample was made because those who had moved into their home during that time period were believed to be likely to still have both the durables obtained with the home and the consumer debt used to obtain durables not purchased with the dwelling unit. Thus, we expected that the analyses of that subgroup would be most revealing of factors which influence the consumers' use of mortgage credit rather than consumer credit to finance consumer expenditures.

A summary of the characteristics of the distribution of ICC is provided in Exhibit 4. Almost 46 percent of the sample had a zero value for ICC, indicating that none of the durables listed in footnote 4 had been purchased with the home. The mean value of ICC was $287 and the maximum value was $2,678.

The mean value of ICC may appear unrealistically low, given the types and expense of household durables that could have been included. However, for purposes of analysis, the absolute value of ICC was less relevant than cross-sectional and cross-state variations in consumers' holdings of ICC.

EXHIBIT 4

DISTRIBUTION OF IMPLIED CONSUMER CREDIT FOR HOMEOWNERS (dollars)

Homeowners since year-end 1975 (N=664)

Distribution of ICC		
0	45.8%	
0 < ICC ≤ 200	5.3%	Mean value including '0' = $287. Maximum value $2,678.
200 < ICC ≤ 300	9.8%.	
300 < ICC ≤ 400	11.7%	
400 < ICC ≤ 500	6.9%	
550 < ICC	20.5%	

SOURCE: CRC 1979 Consumer Financial Survey, Credit Research Center, Purdue University.

IV. Analysis and Results

In section II we formulated two hypotheses concerning factors influencing consumers' use of mortgage credit for consumer purposes versus consumer credit. To test the hypotheses, a cross-sectional multiple regression analysis was performed with each of the following three measures of the relative extent to which consumers had used mortgage credit and consumer credit to finance their expenditures as the dependent variable:

(1) Implied Consumer Credit/Total First Mortgage Credit (ICC/TMOR)

(2) Implied Consumer Credit/Total Consumer Instalment Credit (ICC/TCC)

(3) Implied Consumer Credit/Credit Card Credit (ICC/CCC)

In each of the regression analyses the following independent variables were included:

1) Income = the annual before tax family income, taken as the midpoint of one of 19 categories ranging from less than \$2,000 to greater than \$50,000. This variable controls for any income-related credit rationing.

2) Credit score = a continuous variable representing the credit risk of the individual. The scoring systems used (CC1 and CC2) were based on major banks' scoring systems for credit card applicants. A low score represents a bad credit risk; a high score represents a good credit risk. The variables incorporated in the credit scores used are described in Appendix A. This variable measures the

effect of credit-rationing based on general risk characteristics of the consumer.

3) Dependents = number of dependents (including spouse and members of household under 21 or over 65 years) in the household. This is a control variable to adjust for the fact that, everything else being equal, people with more dependents ordinarily will acquire more household durable goods.
4) Year of purchase of home. This variable allows for the fact that changes may occur in consumers' preferences over time.
5) Low consumer loan rate ceiling = 0-1 dummy variable taking the value of one for respondents in the Arkansas or Wisconsin markets.

The loan rate ceiling dummy variable was used to test the macro implications of our theoretical hypotheses. A positive sign on the variable would provide support for the credit rationing hypothesis; a negative sign would support the relative price hypothesis.

Implied Consumer Credit Relative to Total First Mortgage Credit

The ratio of implied consumer credit to total mortgage credit (ICC/TMOR) indicates the percentage of the original outstanding balance on the first mortgage which was used to finance consumer durables. This ratio should increase with credit risk as a result of credit rationing at the micro level. On average, almost two percent of total first mortgage debt was used to finance consumer durables purchased with the home (Exhibit 5).[5]

EXHIBIT 5

DEPENDENT VARIABLE $\frac{\text{IMPLIED CONSUMER CREDIT (ICC)}}{\text{TOTAL FIRST MORTGAGE CREDIT (TMOR)}}$

	Homeowners After 1975 N = 531
Mean of ICC/TMOR	1.7%
Income	-.0000001 (-.81)
CC1	-.00015 (-1.99)*
Dependents	-.0038 (-2.89)*
Year of Purchase	.0011 (.588)
Low rate	-.0095 (-2.67)*
Constant	-.024 (-.16)
R^2	.036
F	3.96*

*Significant at ten percent level of confidence.

1. For a complete listing of the variables used in CC1 see Appendix B.

SOURCE: CRC 1979 Consumer Financial Survey, Credit Research Center, Purdue University.

Holding the effect of income and family size on total first mortgage debt constant, we found that the proportion of first mortgage credit actually used to finance household durables increased significantly as credit risk (CC1) increased (i.e., as the credit score decreased, ICC increased). This result suggests that high-risk people were more likely to use mortgage credit to finance consumer purchases than lower risk borrowers, a phenomenon which may be attributable to credit rationing. The coefficient of the low rate dummy variable was negative and significant at the five percent level of confidence. Holding other things constant, homeowners in the low-rate markets used a significantly smaller proportion of their first mortgage to acquire household durables than home-owners in high-rate markets. Thus, although the results are consistent with the credit rationing hypothesis at the micro level, overall the results of this analysis indicate that the relative price hypothesis dominates at the macro level.

Implied Consumer Credit Relative to Total Consumer Credit

The ratio of implied consumer credit relative to total consumer credit, including instalment credit plus credit card outstandings (ICC/TCC) measures the importance of mortgage credit as a substitute for consumer credit in the individual's debt portfolio (ignoring second mortgage credit which can also be used to finance consumer purchases).

There are several factors in this analysis that should be noted. The credit score used in this regression differed from that previously used. This credit score (CC2) was also based on a bank scoring system, but it did not include components related to monthly debt payments and credit card ownership--since those factors could have created spurious correlation between the score and TCC. However, this score was much more closely correlated with income ($\rho = .46$) than CC1, the credit score used in the analysis shown in Exhibit 5, for which $\rho = .09$. Second, in some cases, consumers had no consumer credit but had positive amounts of ICC. Since one of our hypotheses considers the possibility that higher-risk borrowers are rationed out of the credit markets, these observations could not be ignored. Thus, whenever total consumer credit equalled zero, rather than throw the observations out we arbitrarily assigned ICC/TCC the value of 100, which slightly exceeded the maximum measured value of ICC/TCC. The results of the analysis are shown in Exhibit 6.

The ratio of $\frac{ICC}{TCC}$ was inversely related to credit risk (CC2). However the coefficient was not significantly different from zero. The coefficient for the income variable was negative and highly significant. The high degree of correlation between the income and credit risk variables resulted in the coefficients for the two variables being inefficient. Nevertheless, the coefficients are unbiased. Thus, we conclude that low-income people were significantly more likely to use mortgage credit versus consumer credit than high-income consumers. This is consistent with rationing of consumer credit to high-risk individuals. The coefficient of the low rate dummy variable was negative but insignificant. Thus, although the analysis suggests that low-income (higher-risk) consumers were significantly more likely to substitute mortgage credit for consumer credit than low risk consumers, we cannot conclude that rate ceilings have a significant effect on the substitution of one general form of credit (mortgage) for another (consumer).

EXHIBIT 6

RELATIONSHIP OF IMPLIED CONSUMER CREDIT TO CONVENTIONAL CONSUMER CREDIT

	Dependent Variables	
	$\frac{\text{Implied Consumer Credit}}{\text{Total Consumer Credit}}$ $\frac{ICC}{TCC}$	$\frac{\text{Implied Consumer Credit}}{\text{Total Credit Card Debt}}$ $\frac{ICC}{CCC}$
Independent Variables		
Income	-.0003 (-2.08)*	-.06 (-3.25)*
CC2	-.054 (-114)	-.755 (-1.20)
Dependents	-2.73 (-2.55)*	-2.94 (-2.09)*
Year of purchase	.025 (.016)	-.185 (.089)
Low rate	-1.84 (-.65)	-9.44 (-2.49)*
Constant	23.63 (.20)	74.67 (.46)
Summary statistics		
R^2	.03	.07
F	2.84*	6.83*
Homeowners after 1975 with complete data	N=513	N=477

*Significant at the ten percent confidence level.

SOURCE: CRC 1979 Consumer Financial Survey, Credit Research Center, Purdue University.

Implied Consumer Credit Relative to Total Credit Card Debt

Credit card credit generally is unsecured and frequently is used to finance consumer purchases of durable goods--particularly since nearly two-thirds of all consumers hold one or more credit cards.[6] Thus, credit card outstandings may be more appropriate than total consumer credit (which includes auto debt, educational debt, and other debt unrelated to household purchases) for measuring consumer credit used for household purposes. The ratio of implied consumer credit (ICC) to total credit card debt (CCC) was thus substituted for ICC/TCC as the dependent variable. The denominator includes the outstanding balances at the time of the survey for all credit cards held by the respondent.

The ratio of ICC/CCC was inversely related to credit risk (CC2), reflecting the difficulty high-risk consumers experienced in obtaining credit card debt. However, the coefficient of CC2 was not significant. The coefficient for the income variable has the expected negative sign and was significant at the one percent level. Again, the high degree of correlation between the income and the credit risk variable resulted in the coefficients for the two variables being inefficient but unbiased. Thus, we conclude that the results are again consistent with credit-rationing of low-income, high-risk individuals. The coefficient on the low-rate dummy variable was negative and highly significant. This result provides further support for the relative price hypothesis which implies that, overall, consumers will use more consumer debt relative to mortgage-related debt to finance their expenditures in states with low consumer credit rates.

The disparate nature of the results pose an interesting problem. Why does the relative price hypothesis seem to hold in general while the income and credit risk results support the notion that creditors engage in credit rationing? The results can possibly be explained by observing that credit rationing does not appear to be any more pervasive, overall, in the low rate states than in the high rate states. In related work, Peterson and Falls [5] found that credit was just as readily available to consumers in Arkansas (the state with the most restrictive rate ceiling), regardless of risk or income level, as it was to residents of other survey states. They explained this by noting that credit was widely available through retailers in Arkansas (who presumably could obtain necessary profits by adjusting the prices of goods). As a result of such adjustments, overall credit supplies were not diminished by restrictive rate ceilings. Nonetheless, many of the very riskiest borrowers in every state may still have had trouble receiving credit (because it was not profitable or possible to raise prices or rates in general sufficiently to compensate for their high risk). Thus, cross-state evidence of credit rationing against the very riskiest borrowers could exist at the same time that aggregate tests did not show elevated credit-rationing in low rate states. That is what we found in these tests.

V. Conclusions

This paper analyzes the extent to which consumers use mortgage credit as a substitute for more traditional forms of consumer credit. It also attempts to determine if the substitution of mortgage credit for consumer credit is a function of the credit risk (income) of the borrower and rate ceilings on consumer loans.

Overall, it found that the amount of mortgage credit used to fund acquisition of consumer durables in conjunction with post-1975 housing acquisitions averaged approximately two percent of the value of the mortgage. That credit equalled fully one-third of the calculated value of durable goods owned by homeowners.

As credit risk and income increased, consumers used a greater proportion of their first mortgage financing for consumer purposes. In addition, as credit risk and income increased consumers used more mortgage credit for consumer purposes relative to total consumer credit and credit card debt. These results suggest that individual consumers frequently used mortgage debt to finance durable goods expenditures if they found it difficult to obtain consumer credit. These findings were consistent with the "micro" implications of the credit rationing hypothesis.

Overall, however, low consumer credit rate ceilings apparently encouraged the substitution of consumer credit for mortgage credit. These results held for consumer usage of mortgage credit by homeowners relative to (1) the original balance of their first mortgage, (2) their consumer credit holdings, and (3) their credit card outstandings. Thus, the behavior of consumers living in states with low consumer credit rate ceilings was consistent with the "relative price" hypothesis not the "macro" implications of the credit rationing hypothesis. Seemingly any additional shift of high-risk consumers toward mortgage credit financing of their expenditures in low-rate states, was more than offset by greater relative use of consumer instalment credit by low-risk borrowers in those states.

FOOTNOTES

[1] Some investigators, such as Seiders [7], have focused on consumer use of junior mortgage financing. Others, such as Gelb [2] and Sommers and Phine [9] have focused on the fact that mortgage debt grew more rapidly than housing prices in the 1960s, and concluded that first mortgage debt was expanding so rapidly that some must have gone to finance nonhousing uses.

[2] See, for instance, the reports of the National Commission on Consumer Finance [4], [5], and Jadlow [3].

[3] If all consumers paid rates exactly commeasurate with their risk, the imposition of rate ceiling would not reduce rates for consumers who paid below ceiling rates--it would merely cause higher-risk customers to be denied credit. However, due to high costs of evaluating risk accurately and the fact that transactions costs can deter individual consumers from shopping for the best possible rate, the imposition of a rate ceiilng can reduce credit costs to low-risk borrowers.

If as a result of the ceiling, moderate risk borrowers are denied credit both finance rates and creditor loss rates will go down and low-risl borrowers will pay a rate more nearly commeasurate with their risk. Previously, low-risk borrowers may have paid higher rates (in lieu of shopping for cheaper credit) and, thereby, partially subsidized losses on credit extended to moderate risk borrowers.

[4] The list of household goods included: television, stereo equipment, stove, microwave oven, refrigerator, freezer, room air conditioner, sewing machine, washer, dryer, dishwasher, or trash compactor.

[5] This figure was affected by assumptions made in the calculation of ICC. If all houses had been new, no depreciation would need to be assumed. Also, consumers may not have owned appliances comparable to those listed in the Sears catalogue.

[6] According to the 1977 Consumer Credit Survey [1] published by the Board of Governors of the Federal Reserve System, 62.9 percent of the consumers surveyed held one or more credit cards. The most frequently held credit cards were retail credit cards, held by 54.3 percent of the respondents.

APPENDIX A

Variables included in calculations of credit scores:

CC1
a) year of birth
b) years in residence
c) age of auto
d) monthly housing expense
e) have checking and savings accounts
f) finance company reference
g) credit cards owned
h) monthly auto expense
i) monthly debt/income (debt excludes mortgage and credit card debt)

CC2
a) years in residence
b) years on job - employment status
c) family income
d) education level of household head
e) home ownership
f) home financing; i.e., 1st or 2nd mrtg., refinance
g) have a phone or not

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